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ORIGINAL PAPER

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# Prevalence and Causes of Medical Absenteeism Among Staff (Case Study at Mazandaran University of Medical Sciences: 2009-2010)

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## ABSTRACT

**Introduction:** Work absenteeism is a significant issue and can be observed in terms of human resources management. Given the importance of staff practices, which are anticipated in every organization, the role of each employee in this system and the implications of their absence as well as the importance of recovery time rest in fast recovery of staff and anticipated costs for their lost work days, thus this study is aimed to determine the extent and causes of medical absenteeism (sickness absence) of head staff of Mazandaran University of Medical Sciences. **Methods and Materials:** This descriptive and cross-sectional study was conducted using medical absenteeism (sickness absence) persons happened in 2010. Research population was included all records of staff working in central departments of Mazandaran University of Medical Sciences. There was no sampling due to the importance of the issue. Studied variables were included age, gender, employment status, employees' education, name of the disease, physician specialty in issuing the medical absence paper, leave issuing reference and department, position of the employee, number of absence days, number of absences, number of annual leave days. Also, data were gathered using a checklist, then were entered into the SPSS software and got analyzed using descriptive statistics. In order to respect the confidentiality, name of the doctors and employees weren't mentioned publicly. **Results:** Based on the results, 1200 employees were leaved the organization due to the sickness issue, which 957 (79.7%) of them were studied. The mean age for those employees was 39±7. Also, total average sick leave days and total sick leave days were 2±1 and 2571, respectively. 40.8% (390 employees) were male and the rest were female. Moreover, 18.3% of sick leaves were issued for singles and the remained were for married employees. Regarding the employees' education, 2% under diploma, 11.3% diploma, 7.8% upper diploma, 47.6% B.Sc., 14.6% MS.c and 15.85 had doctorate degree. Considering their position, 65%, 30.3%, 2.5% and 1.8% were experts, others, heads, and managers, respectively. Furthermore, their employment status indicated that 62.3%, 18.1%, 16.8% and 2.8% of employees were employed in form of formal, short-term contract, long-term contract and other forms, respectively. Among the aspiratory diseases, 115 persons had got cold and 97 were infected to flu. The prevalence of other diseases was as follows: neck and back pain among the skeletal diseases (118 persons), fever and headache among the signs (71 persons) and diarrhea and vomiting among the infectious diseases (88 persons). **Conclusion:** According to the study results, due to the nature of staff work, physical problems, which are caused by doing mental works as well as low mobility, are rising among the employees. Of course, practicing ergonomic considerations, devoting hours in form of exercise break for staff can be effective in this regard. In order to address other diseases, vaster researches are needed with a concentration on exact reasons of work absenteeism.

**Key words:** Absenteeism, Medical absenteeism, Employees, Sick leave, Disease.

## 1. INTRODUCTION

Absenteeism is a major cause of loss in jobs, man-hours, productivity, and lives in the health sector. It also has grave consequences for global economies(1). It is a global occurrence among workers and in Nigeria it is a source of concern in view of the weak national economy and of the health system. Absentee-

ism has been shown to result in loss in man-hours, productivity, finance, jobs and in the health sector, of lives (2, 3)

Absenteeism is a habitual pattern of absence from a duty or obligation. Traditionally, absenteeism has been viewed as an indicator of poor individual performance, as well as a breach of an implicit contract between employee and employer; it was seen

as a management problem, and framed in economic or quasi-economic terms. More recent scholarship seeks to understand absenteeism as an indicator of psychological, medical, or social adjustment to work (4).

Medical-based understanding of absenteeism find support in research that links absenteeism with smoking, problem drinking, low back pain, and migraine(4). Absence ascribed to medical causes is often still, at least in part, voluntary. Research shows that over one trillion dollars is lost annually due to productivity shortages as a result of medical-related absenteeism, and that increased focus on preventative wellness could reduce these costs (2). The line between psychological and medical causation is blurry, given that there are positive links between both work stress and depression and absenteeism (5). Depressive tendencies may lie behind some of the absence ascribed to poor physical health, as with adoption of a “culturally approved sick role”. This places the adjective “sickness” before the word “absence”, and carries a burden of more proof than is usually offered.

Thomas suggests that there tends to be a higher level of stress with persons who work with or interact with a narcissist, which in turn increases absenteeism and staff turnover (6).

If you work in human resources and know a bit about employee benefits, then you know that the hottest topic in HR right now is wellness. But why is Employee Wellness so important?

The U.S. Department of Health and Human Services noted these striking statistics about Americans in the workplace: 59% of employees do not get adequate exercise, 50% or more have high cholesterol, 27% have cardiovascular disease, and 26% are overweight by 20 percent or more and 24% have high blood pressure.

An important issue of absenteeism and the cost of attendance at work, instead of replacing a missing person, interrupting the current work, the absent person devolve upon others (7, 8, 9) and but the amount of allowable absences for measuring absenteeism and not suitable as a basis for career success. Since most employees' absences due to medical problems related to small and also questioned the authenticity of these documents is. It seems to absences due to illness are also associated with motivation and largely reflects social norms, However, when employees are playing the role of the patient and the absence of their, others are forced to do their work (7). HRM in the presence of absenteeism in the workplace less persons would consider the required hours of pre-determined schedule is defined (7). On the other hand, the management, staff quorum for absence from work due to illness is defined.

Several studies on absenteeism regarding medical issues have been done. In study of Aslan Abadi and colleagues from 187 persons working, 117(62%) had used medical leave, at least 324 times, and 1684 days during a year and a half. That is to say, each employee on average used 9.2 days of medical leave in a year and a half (10).

Fifty three percent of the 474 respondents reported at least one absence spell in the year. Absenteeism was highest among domestic staff (70.8%) and lowest among the doctors (46.9%). The average number of spells per absentee per year was 1.7 and the average duration of spells was 4.1 days while the incapacity rate was 7.2 days. The overall absenteeism rate was 1.7%. Absenteeism was significantly associated with increasing age ( $p=0.000$ ), gender, [females<males ( $p=0.001$ )] and with marital status [married<unmarried ( $p=0.02$ )]. Higher rates of absentee-

ism were recorded among staffs who were stressed (92.1%), not satisfied with the working environment (66.7%) and those who experienced job dissatisfaction (64%). Engagement in physical activities impacted positively on absenteeism ( $p=0.02$ ). Ill health accounted for 54.6% of absenteeism, with the bulk of it (67.5%) due to malaria. Though the overall absenteeism rate (1.7) was lower than the level of 4 considered to be excessive, 53% of the study population had been absent from work at least once in the study year (1).

Mohebi et.al found that found that the GAR was 88%, SAR 35% and UAR 52%. The other measures including SR, DR and AFR were 4.4 per day, 0.78 per day and 0.69 persons per day. Short spell duration of sick absence (1 to 3 days) was the most frequent in the subjects (61%). The long-term spell duration (8-14 days) was calculated 21%. Short spell duration of sick absence was the highest in the lesser than 20 old-years and median spell duration (4-7 days) was frequently more than others in the range of 40-49 old-years. The most frequent of long-term absence (8-14 days) was found in the range of more than 50 old-years (11).

Given the importance of the headquarters operations per device foreseen, It is the responsibility of each employee's role, the consequences of his absence, As well as improving recovery time faster than the rest of other persons, As well as anticipated costs for individuals working days, it seems that it is necessary to investigate the causes of absenteeism due to illness, employees. Because this research was not conducted in Mazandaran University of Medical Sciences, on the other hand, nature of the employee's job level is used for overall health, so we would like to study the ratio of medical leave of staff of Mazandaran University of Medical Sciences.

## 2. METHODS AND MATERIALS

This descriptive and cross-sectional study was conducted using medical absenteeism (sickness absence) persons happened in 2010. Research population was included all records of staff working in central departments of Mazandaran University of Medical Sciences. There was no sampling due to the importance of the issue. Studied variables were included age, gender, employment status, employees' education, name of the disease, physician specialty in issuing the medical absence paper, leave issuing reference and department, position of the employee, number of absence days, number of absences, number of annual leave days. Also, data were gathered using a checklist, then were entered into the SPSS software and got analyzed using descriptive statistics. In order to respect the confidentiality, name of the doctors and employees weren't mentioned publicly. Approval of the proposal was obtained for review and approval.

## 3. RESULTS

Based on the results in 2010, 1200 employees were leaved the organization due to the sickness issue, which 957 (79.7%) of them were studied. The mean age for those employees was  $39\pm 7$ . Also, total average sick leave days and total sick leave days were  $2\pm 1$  and 2571, respectively. 40.8% (390 employees) were male and the rest were female. Moreover, 18.3% of sick leaves were issued for singles and the remained were for married employees. Regarding the employees' education, 2% under diploma, 11.3% diploma, 7.8% Associate degree, 47.6% B.Sc., 14.6% MS.c and 15.85 had doctorate degree. Considering their position, 65%, 30.3%, 2.5% and 1.8% were experts, others, heads, and managers,

respectively. Furthermore, their employment status indicated that 62.3%, 18.1%, 16.8% and 2.8% of employees were employed in form of formal, short-term contract, long-term contract and other forms, respectively. Among the aspiratory diseases, 115 persons had got cold and 97 were inflicted to flu. The prevalence of other diseases was as follows: neck and back pain among the skeletal diseases (118 persons), fever and headache among the signs (71 persons) and diarrhea and vomiting among the infectious diseases (88 persons).

Reference issuer	F (%)	Reference issuer	F (%)
General Practitioner	738(77.1)	Hospital*	378(39.4)
specialist Physician	180(18.8)	Medical Office	399(41.6)
Professor	12(1.3)	Medical clinic*	179(18.7)
Unspecified Ω	27(2.8)	other¥	1(.1)
Total	957(100)	Total	957(100)

Table 1. Reference and Issuer Center in the frequency and causes of sick absence from headquarters staff, Mazandaran University of Medical Sciences, 2010. Ω Only a signed certificate, but without including the issuer profile and seal. \* (includes security organization, private and public) ¥ The official university letterhead

Place of working	Number of staff	Frequency of medical leave	Percent	Total days	Average days
Deputy of Human Development	194(32)	303(31.7)	156	649	2.14
Deputy for food and Drug	63(10.4)	172(18)	273	441	2.56
Dean	78(13)	141(14.7)	180	492	3.48
Deputy for treatment	145(24)	132(13.8)	91	236	1.78
Deputy for Student Affairs	51(8.4)	87(9.1)	170	300	3.44
Deputy for Education	48(8)	89(9/3)	185	214	2.4
Deputy for Research	25(4)	33(3.4)	132	239	7.24
Total	604(100)	957(100)	158	2571	2.68

Table 2. Frequency of use of sick absenteeism in the workplace in terms of sick absenteeism among headquarters staff, Mazandaran University of Medical Sciences, 2010

The mean duration of sick was for Research Deputy, view point of total days and number of medical leaf was for deputy for treatment, of the deputy for food and drug use accounted for the highest.

Among the respiratory diseases, 115 persons had got cold and 97 were inflicted to flu. The prevalence of other diseases was as follows: neck and back pain among the skeletal diseases (118 persons), fever and headache among the signs (71 persons) and diarrhea and vomiting among the infectious diseases (88 persons).

#### 4. DISCUSSION

The results showed that most disease was more common in those aged 38-41 years. However, due to the nature of the administrative staff who often are the intellectual powers of the university, and if exercise is not a part of their daily activities;

Sickness	F (%)	Sickness	F (%)
Breathe	295(35.5)	Obstetrics and Gynecology	11(1.3)
Skeletal	147(17.7)	Skin	10(1.2)
Si& symptom	122(14.7)	Nerves	11(1.3)
Infectious	93(11.2)	Malignant	2(.2)
Urinary	36(4.1)	Chromosome	3(.4)
Injuries	36(4.1)	Health reasons	2(.2)
Digestion	25(3)	Endocrine	1(0.1)
Cardio Vascular	24(9.2)	total	830(100)±
Eye	12(1.4)		

Table 3. Prevalence of medical illness resulting in absence based on chapters of International Classification of Diseases (ICD-10) in the headquarters Staff of Mazandaran University of Medical Sciences, 2010. ± for documenting some of the diagnoses of diseases were used un common medical initials and abbreviations and in some persons , they were illegible.

categories age	Respiratory disease	Skeletal disease	signs	Infectious disease	Total
>26 years	6	0	44	1	11
26-29	27	2	13	15	57
30-33	32	3	20	18	73
34-37	66	30	20	20	136
38-41	67	36	19	23	145
42-45	37	41	30	6	114
46-49	41	16	5	8	70
50-53	8	7	7	0	22
54-57	9	12	4	2	27
58 and more	2	0	0	0	2
Total	295	147	122	93	657

Table 4. Consensual table of four diseases which have the maximum frequency based on the age of staff in studying of medical absence of headquarters' staff of Mazandaran University of Medical Sciences

so it seems that we should expect a decrease in the younger age range. Male workers between the ages of 20 and 39 years were the most likely to experience an episode of work absenteeism involving neck pain (12).

The results showed that the number of women who have been used medical leave certification more than men. This case were not matched with studies of Ferrie (13) and Nurmi (14), however, it was consistent with studies of Aslan Abadi (10), Restrepo and Koopmans (15) and Koopmans (16). This could be due to greater morbidity in female and more mortality greater in men.

The results were should often medical leave certifications issued in the medical office. This is probably due to the fact that despite there is different educational and therapeutically centers at University of Medical Sciences, but its employees often preferred to visit the medical office, or it may be because of more patients in university clinic centers, at one hand, medical offices provide a more comfortable office or meanwhile they haven't administrative bureaucracies and even they haven't referral system; certainly, they have more medical offices than university medical centers or the reference number of the city, and university employees preferred to take advantage of these facilities. In other cases, the application may be optimistic and certification for medical leave is easier in other medical offices

than University Medical Center. The highest rank, hospitals have been issued medical leave certificate. This may be because the 24-hour hospital which the patient prefers to be served at any time to go and get the necessary treatment.

The results showed that general practitioner issued more medical leave certificates. However, it cannot certainly be said in this context, but it would be due to the high proportion of general practitioners and specialist physicians and professors, or because of less complexity of common diseases, general practitioner could manage them easier and easy access to general practitioner and ease of issuing of medical leave certification by general practitioners were the priority of selections.

The results showed that contract employees had absent more than others in this study were approved by the Restrepo (15), of course, this may be attributed to the younger employees' contract and therefore seems to do administrative tasks such as mission or even on the bench and hits most of these troops may be deployed until other groups and employees were more involved in the work environment, directors or employees because of work experience usually prefer to delegated to junior staff. There are some things that need to be run out of a contract or project staff which this activity could be a good reason for greater exposure and increased risk of disease. Most employees are on leave due to respiratory diseases. It can be attribute a high incidence of respiratory illnesses such as colds and influenza-attributable morbidity. Although it cannot be said surely, but issuing of the certificate by doctor is easier than other diseases. In study of Eriksson also, the ones that are not significant are Chronic Obstructive Pulmonary Disease (COPD) for both sexes as well as Diabetes, Thyroid disorders were the most diseases lead to medical leave (17). The causes lead to medical leave observed in Study of Isah (1) in neck and Aryan pour (18) in low back pain with (18%). It is obvious that, nature of the job can be more effective. For example, For example, in hard labor jobs and Or in jobs that are done under the influence of climatic factors, perhaps, expect more sophisticated disorder is unlikely. It should be noted that in this case the intervention variables in the other as employment in the second, third and even fourth, lack of adequate rest, despite not having a second job (Especially for women, the employment of children in the household and the second job is not often is not considered as a second job), Stressful working conditions are well known to have a negative impact on the worker's health, chronic fatigue (Vercoulen) and reported absenteeism) are mainly associated with a low control, low social support at work, high over commitment and high level of imbalance. Inversely, job demands do not make any significant contribution in the logistic regression models for the above-mentioned health outcomes (19), stress in Godlin's study, Serial holidays, which are not addressed in this study (19).

Respiratory diseases could be due to seasonal changes, non-compliance with safety tips and simply send out them. The skeletal diseases and its conditions, Failure to observe proper position and nature of the work to be cited administrative staff, less mobility and prolonged sitting behind a desk. Keshtkaran et.al studied about ergonomics disorders in the personnel of medical records department at training hospitals of Shiraz University of Medical Sciences (20). Due to symptoms resulting to ordering of medical leave such as fever or headache which can be a condition of another disease, Perhaps due to a lack of or inadequate medical science (often sick was issued by the general practitioner)

And even a variety of symptoms that can be attributed to many introduced diseases. It might be argued that because most individuals have hard look due to mental disorders even with very little to these diseases. Nature of the disease may be registered in certain psychiatric disorders, perhaps, the doctor refused to write any mention of the real reason and stop for signing and Patient expressed his/her psychological and mental problems in the form of physical problems. However, it is alleged that we were not observed psychiatric disorders, among university workers; it seems a little unreal to investigate this claim further research is recommended.

In a general summary, the results showed those 2571 days medical leave certificates; 2615 in accordance with 7 years staff's claiming was paid the equivalent of 7 years was used in 2009. In Aslan's study, it was in term of 1.5 years equivalent to 4 years and 6 months (10).

In this study, we also were faced with some limitations. For example, the issue of staff's confidentiality of diseases, some evidences that the disease was not mentioned by Name and Family name.

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## BOOK REVIEW

# SCIENCE EDITING IN BIOMEDICINE AND HUMANITIES

Izet Masic and Enes Kujundzic. Sarajevo: Avicena, 2013. 272 pages; ISBN 978-9958-720-49-9

The book presents an original effort to summarize the role of academic periodicals and relevant media for communication of scientific knowledge, ideas and new scientific discoveries, various systems of the knowledge classification and categorization, methods for preparation of the papers with scientific and professional aspirations, including insight into the different types of information resources and instruments on access to sources of information in scientific communication.

The book is conceptualized upon contemporary knowledge, methods and methodological approaches toward bases of knowledge and new technologies. The book presents a common ground of an interdisciplinary matter in the research in medicine laboratory, clinical and public health fields, integrating two important areas of scientific inquiry—Biomedicine and Humanities by such key words as Bioethics, Bioinformatics, Social Justice and Human Solidarity. All those various types of research could be of benefit to the society and the welfare of the individual in the community by gathering of evidence to improve clinical and public health practices and policies, identification of health problems and/or methods to promote health and prevent disease and disability. The expansion of scientific literature lays the foundation for the future scientific research, health policy and public health practice making the material accessible to all those who are pursuing or planning to carry



out research in medicine, biologic and social sciences. Personal well-being, in general, relate to adoption of new knowledge in society, community for creating healthy environment development and improvement of new skills and leading healthy life styles.

The book is fulfilling an important gap and dedicated towards improving the rank and relevance of domestic academic periodicals thus hopefully contributing to the general scientific competitiveness, first of all, in

Bosnia and Herzegovina, as well as in South-eastern Europe and broader.

The publication is a result of a rich scientific knowledge of authors and more than 30 years teaching and research experience in social medicine and public health, community and family medicine at the University in Sarajevo Faculty of Medicine.

The 272 pages are distributed in 17 chapters with references and consulted literature added to each chapter, detailed contents and useful explanation of terms and abbreviations in publishing.

The book is directed toward a certain group of professionals in biomedicine and humanities: for those who intend to carry out scientific research, especially the young doctors and students on specialization, preparing graduate papers, master thesis and doctoral dissertation. The book can be used by students at all levels, from undergraduate to postgraduate master and doctoral studies, and professionals in various clinical disciplines and public health who tend to writing research proposal, selecting a proper research strategy, conducting the research itself and submitting a final report. The book can also be useful as a guideline for all medical and other professionals in biomedicine and humanities in conducting and promoting of their professional and research work.

Prof. Dr. Doncho Donev