

THE INFLUENCE OF PSYCHO-PROFESSIONAL RISK FACTORS IN OCCUPATION-RELATED CARDIOVASCULAR DISEASES

Narcisa Carmen Mladin¹⁻⁴, Casiana Stănescu^{3,4}, Maria Pușchiță^{2,4}

¹ Department of Occupational Medicine, County Emergency Hospital Arad, Romania

² Department of Internal Medicine, County Emergency Hospital Arad, Romania

³ Department of Obstetric and Gynecology, County Emergency Hospital Arad, Romania

⁴ "Vasile Goldis" Western University of Arad, Faculty of Medicine, Department of General Medicine

ABSTRACT. According to specialized studies, the prevalence of psycho-professional risk factors in occupation-related CVDs is continually increasing in Romania. Cardiovascular diseases have special medical importance and a major impact on health and professional activity. The analysis of psycho-professional risk factors in cardiovascular pathology was conducted over a period comprised between 2013 and 2015 and included the study of two groups of subjects: **Group I Target** - 60 unidentified subjects with occupation-related CVDs, of which 30 were employees of a wood-processing plant in Arad City, and 30 were patients of an individual medical practice in Arad; **Group II Case**, composed of 60 patients from the Department of Occupational Medicine at the Arad County Emergency Hospital, selected from a number of 429 admissions with a cardiovascular disease diagnosis. Studied groups were homogenous in terms of number, gender and age (35 to 65 years old). The intent of the study was communicated to all, and written consent was obtained, under signature, from every subject; they were assured of the strict compliance with ethical norms, in accordance with the Declaration of Helsinki, and Romanian legislation in this matter. To obtain the information required for research, an interview was held, accepted and recorded in writing by each subject, as were collective talks regarding the danger risk factors pose on health. All subjects were consulted and interviewed, and a general clinical observation sheet and occupational case history were drawn up for them. The research showed an increased incidence of psycho-professional risk factors in **Group II Case** patients, as compared to **Group I Target**. The impact of psycho-professional risk factors is reflected especially on patients in **Group II Case**, with an increase in the development of cardiovascular complications during the study. Although the human body is physiologically created to respond to external factors of any nature, psycho-professional risk factors influence cardiovascular function over time, damaging the HPA axis and SAM, with grave consequences on work capacity. As such, in accordance with law no. 418/2004, employers should receive counseling in promoting occupational health, creating optimal conditions, and most of all eliminating occupational stress, this being the responsibility of occupational medicine specialists.

KEYWORDS: psycho-professional risk factors, occupation-related cardiovascular diseases.

INTRODUCTION

It is well-known that it is easier and more advantageous to prevent a disease than treat it. Cardiovascular diseases are the leading cause of death across the world (1); preventing these diseases, knowing their determinants, as well as the measures required for changing them, constitute a vital concern and foster decreasing mortality rates.

The term "risk factor" was first used by TR DOWBER and W B KANNEL in 1921, in the first report of the Framingham study (2). Kannel, who signaled the presence of conditions associated to arterial hypertension, smoking, alcohol etc., conducted a comparative study to ascertain the extent to which the diseases is aggravated in people with risk factors and those without risk factors.

Risk factors are divided into three categories:

1. Modifiable risk factors: smoking, alcohol, obesity, dyslipidemia, diabetes mellitus etc.

2. Unmodifiable risk factors: age, sex, family history, genetic inheritance etc.

3. Psycho-professional risk factors.

CVD risk defines the sum of all factors creating atherosclerosis, clinically determining coronary disease, strokes, aortic aneurysms, etc. (3)

Evaluation of risk factors in CVDs must be made by detecting and inventorying all factors, without ignoring the less significant ones; the sum of unknown and lesser factors aggravate health state more than one known major risk factor. Since until now there is no singular system comprising all known risk factors in CVD, the phrase "global risk assessment" is not justified in this regard.

However, the most widely used system for assessing cardiovascular risk factors in the world is FRAMINGHAM (4), supported by international guides – the SCORE risk chart and the UKPDS risk engine.

Risk factors in occupation-related CVDs are the consequence of situations which generate or contribute to physical or psychological overstraining of employees, along with determinants of cardiovascular diseases.

The care for promoting cardiovascular health must also be directed towards promoting a healthy life

and work style, such as: daily exercise; giving up smoking; a balanced diet, low in sugars, high in cereal fibers, folates and omega 3 acids, rich in polyunsaturated fats; drinking one half of glass of wine per day.(5)

AIMS OF RESEARCH

1. Timely identification and assessment of risk factors in occupation-related CVDs.
2. Influence of psycho-professional risk factors in the occurrence and progression of cardiovascular diseases.
3. Objectivization of risk factor implications on work capacity in CVDs.
4. Directing the patient towards a favorable behavior in CVD therapy, by eliminating risk factors and making lifestyle changes.
5. Promoting healthy behavior, in order to diminish the aggressive impact of risk factors on work capacity in patients with CVDs.
6. Preventing, decreasing and managing the occurrence of occupation-related diseases.
7. Initiating and applying strategies to eliminate occupational and non-occupational factors that are harmful to the health of professionally active individuals.

MATERIAL AND METHOD

Groups in the study

In conducting this study, two groups were formed, each containing 60 persons. The first group of subjects not identified with CVDs, called **Group I TARGET**, consisted of 30 employees from a wood-processing plant in Arad – SC MOBIL ART SRL – of which 15 were men and 15 women, aged 35-65; and 30 patients from an individual medical practice in Arad, not identified with CVDs, professionally active, 15 men and 15 women, aged 35-65.

The second group of 60 persons was constituted by selection from a number of 429 patients identified with occupation-related CVDs, from the Department of Occupational Diseases and Occupational Medicine of Arad County Clinical Hospital, called **Group II CASE**, of which 30 were men and 30 women, aged 35-65, admitted and re-admitted between 2010 and 2014.

The intention of the study was communicated to all and written consent was obtained from each subject under signature; strict compliance with ethical norms was ensured, in accordance with the Declaration of Helsinki and relevant Romanian legislation.

For actual communication with subjects, an interview was arranged and accepted by each subject, and was then recorded in writing; collective talks were held on the danger posed by risk factors in occupation-related CVDs on health.

All subjects were checked and interviewed; a general clinical observation and occupational history sheet was prepared for each subject.

From the very first direct contact with those who would become subjects in the study and showed major risk factors for developing occupation-related cardiovascular diseases, they were advised to urgently undergo all necessary tests and, most importantly, to make some lifestyle changes.

Results obtained in study group I “**Target**” were also communicated to the management of the company, with recommendations on the organization of labor on the basis of Law no. 319-2006, art. 178 para. 2, 185, para.1, let. c. Labor Code, and Order of the Ministry of Health no. 240-2004). (6)

The study on the 30 other subjects in group I, patients of an individual medical practice from Arad, not identified with CVDs, was conducted with help from the family physician, who made observation sheets available to us and facilitated meetings with each separate subject, including recording the interview.

Location, conduct of the study and research methods

Location

This research took place in three locations. For subjects employed at the wood-processing plant, the activity took place on its premises, in a room made available by the management of the company, whereas for patients from the individual medical practice, check-ups took place within the practice, during and outside working hours. Patients from the Department of Occupational Diseases and Occupational Medicine were examined at the Hospital, between 2013 and 2015.

Conduct of the study

In a first phase, an inventory was made of the number of people admitted and diagnosed with CVDs over a period of four years, starting with 2010; a group of 60 patients was selected from the total number of admitted and re-admitted subjects. For each of them an observation sheet was prepared with data derived from existing admission and re-admission files.

Patients’ re-admissions, which were largely annual or bi-annual, were tracked over that period, on which occasion discussions were held with each one of them, and their study sheets were completed with personal data, personal pathological background and occupational history. For special clinical cases, other investigations were also performed, with support from the Head of Department.

The same protocol was used for subjects of **Group I – Target**. All patients were urged to take biological samples in order to check blood sugar, total cholesterol, HDL- cholesterol, triglycerides, uric acid, etc. until the second meeting to this end.

The second phase, for patients of **Group II Case**, meant a re-evaluation of their health state since their last admission, and especially the evolution of risk factors in the occurrence and aggravation of CVDs. The same procedure was applied to patients from the Arad-based medical practice. In certain situations, subjects were recommended other specialized check-ups in ordered to establish diagnosis.

It is worth mentioning that during research, three of the subjects withdrew, as they were out of country.

Statistical data analysis

To maximize accuracy in determining the results of this study, all information was transcribed into writing and stored into a Microsoft Excel database; the diagnosis was coded in order to compare it to existing statistical data. Results were graphically represented through histograms, continuous variables were expressed as DS average, and discrete variables as number and proportions. The Pearson method was used to analyze the relation between linear parameters with normal distribution, and the Spearman method was used for non-parameter distribution. Data distribution was verified with the Kolmogorov test.

Ethics of the study

The subjects involved in this study took note of the advantages and disadvantages of participation. Written assent was received from the management of

the company where the study subjects were working. They confirmed, by signature, their agreement to participate, and were assured of the study's compliance with Romanian legislation in the matter and with the provisions of the "Declaration of Helsinki." Subjects were not compensated for participation and did not incur any financial expenses. Test results were communicated to both subjects and their family physician. Identification data obtained during the study were not and will never be used for a different purpose.

DETERMINATIONS

The following determinations were initiated in the first phase:

I. Risk factors in occupation-related CVDs were identified in subjects present in the two groups intended for study, **Group I Target** and **Group II Case**, their percentage distribution, share by sex and age.

II. The values of blood pressure and heart rate were measured in study subjects, with percentage distribution and share by sex and age.

III. Risk factors were classified in subjects studied in the two groups:

1. Modifiable risk factors
2. Unmodifiable risk factors
3. Psycho-professional risk factors

1. In subjects with modifiable risk factors the following were determined: blood pressure, heart rate, smoking, alcohol consumption, salt intake, sedentary lifestyle, obesity, blood sugar on an empty stomach, total cholesterol, triglycerides, lack of physical exercise.

2. In those with unmodifiable risk factors, the following were determined: blood pressure and heart rate, family history, personal history, physiological and pathological history and living conditions (status, composition of the family, level of training, area of activity, personal income, income by family member and domicile.)

3. Subjects with psycho-professional risk factors had the following determinations: blood pressure and heart rate, duration of working time, break timing, shift timing, work rate, intensity of physical effort, monotonous activities, imposed or too strictly directed activities, fear of making mistakes with socio-human and economic consequences, other sources of psychological overstrain, activities in alternative shifts, night time activities, activities during irregular working hours, noise and microclimate conditions at the work place, activities performed outside working hours and during weekends, completed holidays, unpaid leaves or days off during a work year, changes in job description, sick leaves, Cod.110-115 H.T.A and Cod.120-125.C.I.D in each year of the four considered in the study.

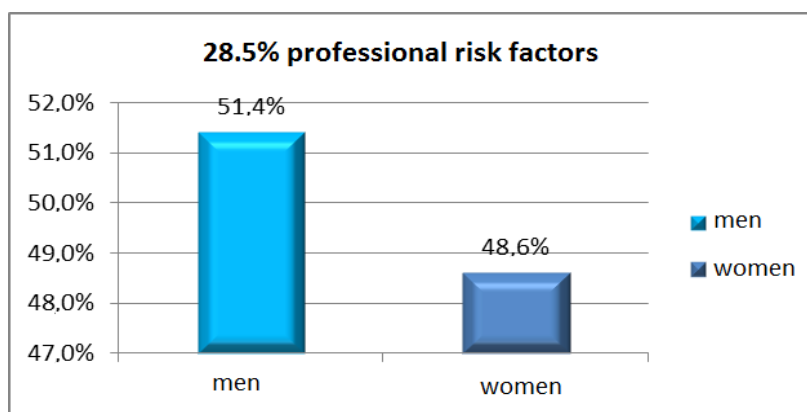
RESULTS

Following the study conducted on the **120** subjects from the two groups, the following results were found:

Psycho-professional risk factors

- **28.5 %** were identified with occupation risk factors, an important share being found in both male (51.4%) and female subjects (48.6%), the average age being 48 (**Fig.1**).

Fig.1



PSYCHO-PROFESSIONAL RISK FACTORS

Organization of labor: duration of working time, break and shift timing, rate and intensity of physical effort; monotonous activities; imposed or too strictly directed activities; fear of making mistakes with socio-human and economic consequences; sources of psychological overstrain; work in alternative shifts; night time activity; work during irregular working hours; work place organization and contributing factors (noise, lighting, microclimate conditions).

Of all subjects, 28.5 % were identified with occupational risk factors. An important share was found in male (51.4%) and female subjects (48.6%), the average age being 48, with the following blood pressure values:

- 63.4% within normal limits below 140-90

- 36.6% over normal limits, an important share being found in men (65.3%) and women (34.7%) with an average age of 48.

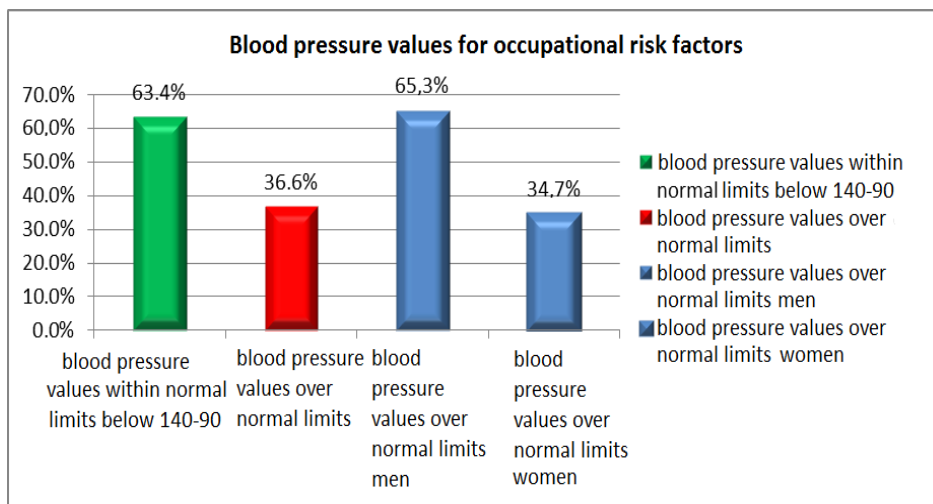
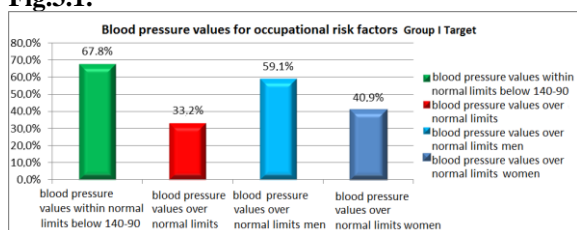


Fig.2

COMPARATIVE PRESENTATION OF RESULTS FROM THE TWO STUDIED GROUPS

Group I Target Of all subjects identified with an occupational risk factor, 31% are found in **Group I**; an important share was found among male (62.8%) and female subjects (37.2%), with an average age of 51 and who registered the following blood pressure values: 67.8% within normal limits below 140-90 mmHg; 33.2% over the normal limit, an important share in men (59.1%) and women (40.9%) with an average age of 53.

Fig.3.1.



From the research conducted, according to the interview with each separate subject, recorded in writing under signature, the following results were obtained:

Duration of working time

- 4 hours - 15%
- 8 hours - 80%
- Over 8 hours - 5%

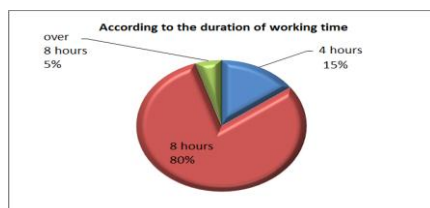
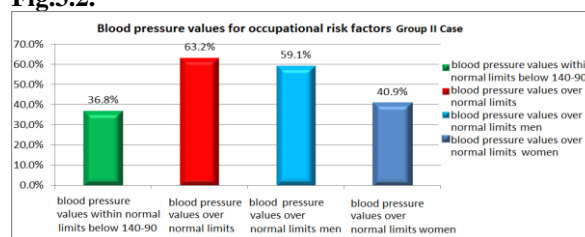


Fig.4.1.

Break timing

Group II Case Of all subjects identified with an occupational risk factor, 69% are found in **Group II**; an important share was found among male (65.1%) and female subjects (34.9%), with an average age of 55 and who registered the following blood pressure values: 36.8% within normal limits below 140-90mm Hg; 63.2% over the normal limit, an important share in men (59.1%) and women (40.9%), with an average age of 56.

Fig.3.2.



From the research conducted, according to the interview with each separate subject, recorded in writing under signature, the following results were obtained:

Duration of working time

- 4 hours - 35%
- 8 hours - 55%
- Over 8 hours - 10%

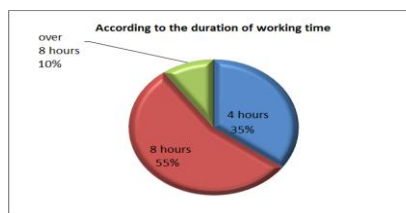


Fig.4.2

Break timing

One break at 4 hours – 88.3%.
 Several breaks at 8 hours – 11.7%.

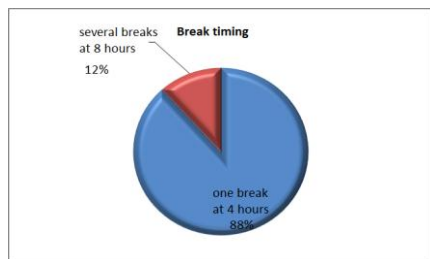


Fig.5.1.

Shift timing

- 66.7% from 7 am to 3 pm,
 - 26.2% from 2 pm to 10 pm,
 - 7.1% from 10 pm to 6 am.

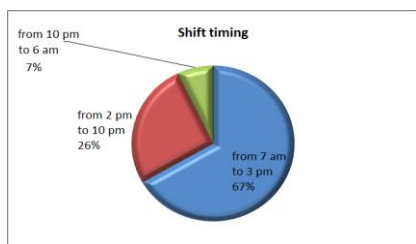


Fig.6.1.

Work rate

Alert 12.6%.
 Moderate 78.3%.
 Slow 9.1%.



Fig.7.1.

Intensity of physical effort

Intense effort 11.7%.
 Moderate effort 61.2%.
 Mild effort 27.1%.

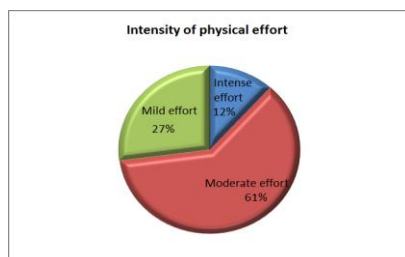


Fig.8.1.

Monotonous activities,

YES 27.8%,
 NO 72.2%.

One break at 4 hours – 68.3%.
 Several breaks at 8 hours – 31.7%.



Fig.5.2.

Shift timing

- 46.2% from 7 am to 3 pm,
 - 36.4% from 2 am to 10 pm,
 - 17.4% from 10 pm to 6 am.

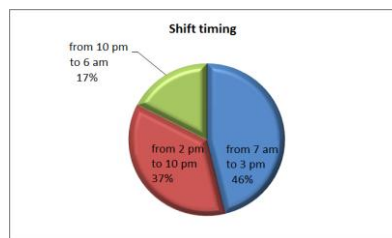


Fig.6.2

Work rate

Alert 34.6%.
 Moderate 65.3%.
 Slow 10.1%.

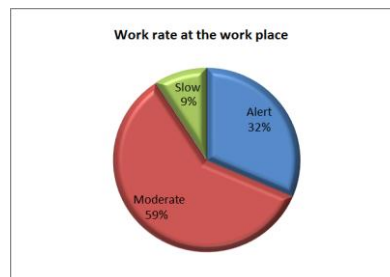


Fig.7.2.

Intensity of physical effort

Intense effort 31.7%.
 Moderate effort 51.2%.
 Mild effort 17.1%.

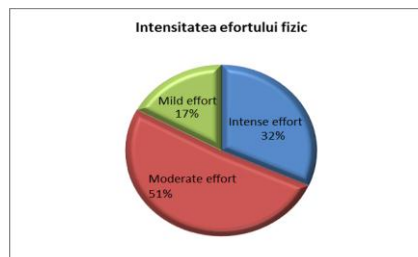


Fig.8.2

Monotonous activities.

YES 52.8%,
 NO 47.2%.

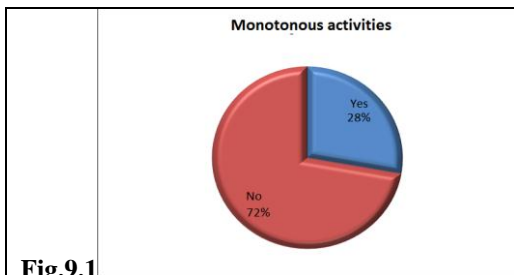


Fig.9.1

Imposed or too strictly directed activities

YES 23.9%.
 NO 76.1%.

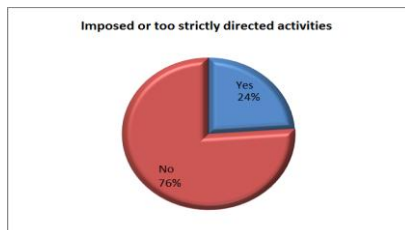


Fig.10.1.

Fear of making mistakes with socio-human and economic consequences

YES 68.9%.
 NO 31.1%.

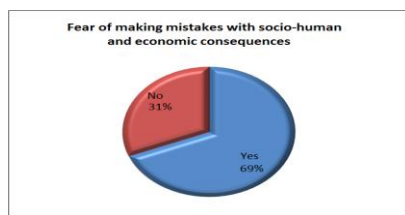


Fig.11.1.

Other sources of psychological overstrain

YES 27.8 %.
 NO 72.2 %.

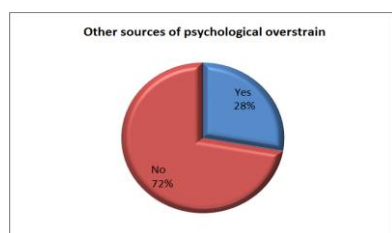


Fig.12.1.

Activities in alternative shifts

YES 33.1%.
 NO 76.9%.

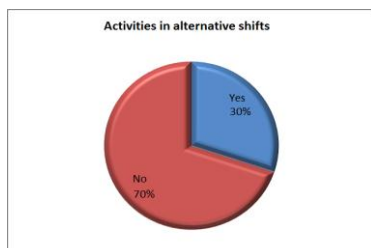


Fig.13.1.

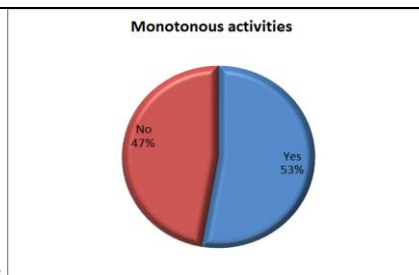


Fig.9.2

Imposed or too strictly directed activities

YES 54.9%.
 NO 45.1%.

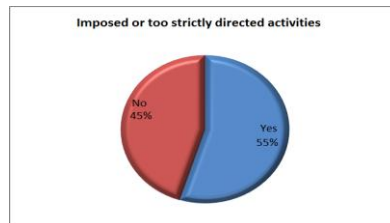


Fig.10.2.

Fear of making mistakes with socio-human and economic consequences

YES 78.9%.
 NO 21.1%.

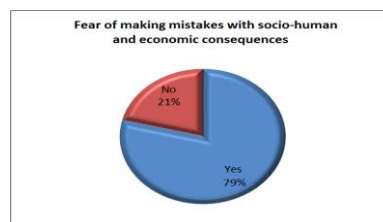


Fig.11.2.

Other sources of psychological overstrain

YES 57.8 %.
 NO 42.2 %.

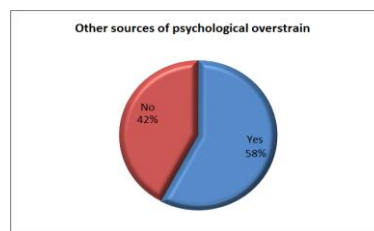


Fig.12.2.

Activities in alternative shifts

YES 33.1%.
 NO 76.9%.

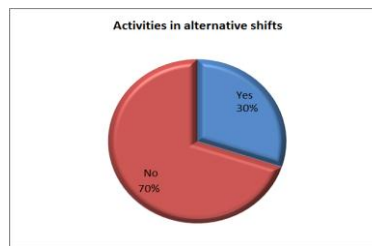


Fig.13.2

Night time activities

Night time activities
 YES 33.5%,
 NO 66.5%. **Fig.14.1.**

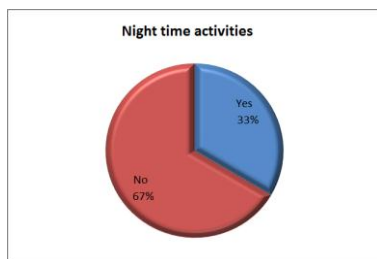


Fig.14.1.

Activities during irregular hours
 YES 32.1%,
 NO 67.9%. **Fig.15.1.**

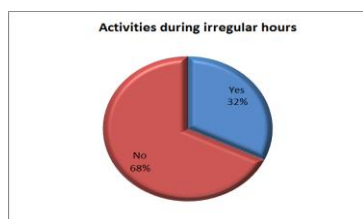


Fig.15.1.

Noise, lighting, microclimate conditions at the work place
 YES 26%,
 NO 74%.

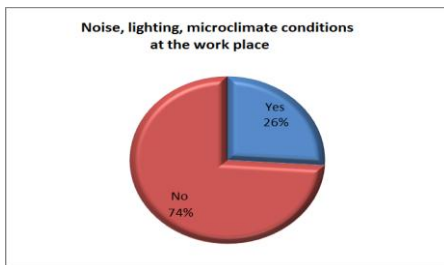


Fig.16.1.

Overtime work
 At home 64.2%.
 In other locations 36.8%.

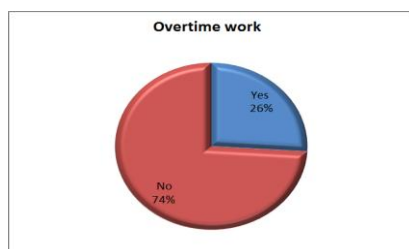


Fig.17.1

Work during week-ends
 YES 34.4% of which at home 85.4%; at work 14.6%.

YES 63.5%,
 NO 36.5%.

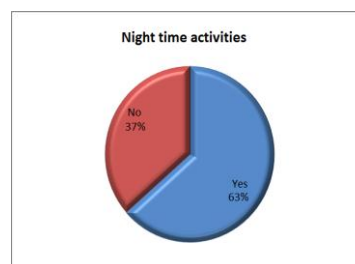


Fig.14.2.

Activities during irregular hours
 YES 62.1%,
 NO 37.9%.

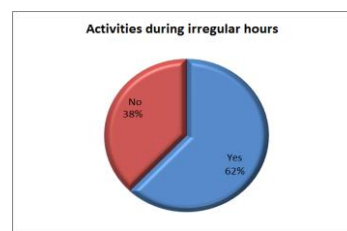


Fig.15.2

Noise, lighting, microclimate conditions at the work place
 YES 55.6%,
 NO 44.4%.

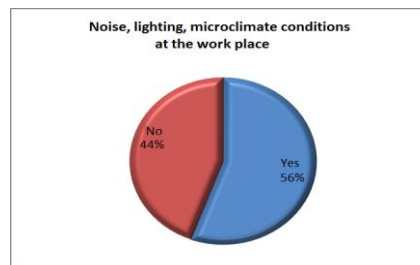


Fig.16.2.

Overtime work
 At home 54.9%.
 In other locations 45.1%.

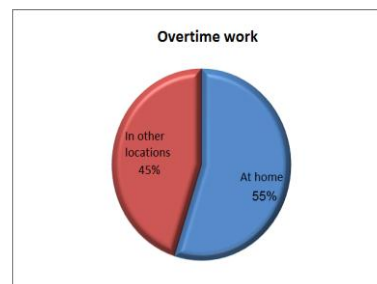


Fig.17.1

Work during week-ends
 YES 54.4% of which 75.6%; at work 24.4%.



Fig.18.1.

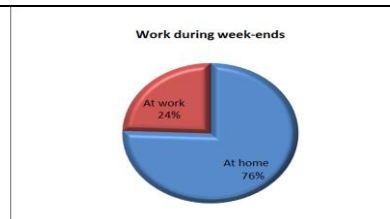


Fig.18.2.

Completed holidays

YES 98.9%, of which at home 63.2%, at a local resort 20.8 %, abroad 16.1%.

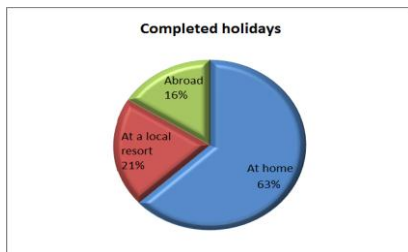


Fig.19.1.

Completed holidays

YES 98.4%, of which at home 63.2%, at a local resort 29.8 %, abroad 7%.

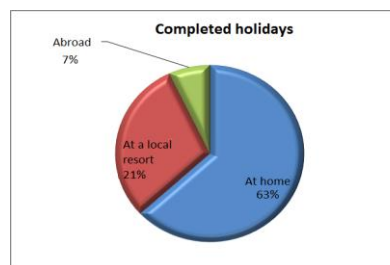


Fig.19.2.

Unpaid leaves and days off in one year

In 2010 – 8.2%; in 2011 – 6.8%; in 2012 – 5.1%; in 2013 – 3.8%.

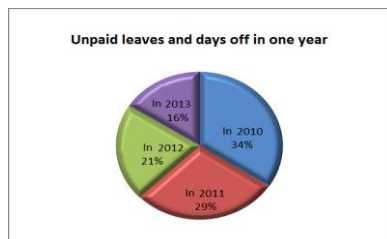


Fig. 20.1

Unpaid leaves and days off in one year

In 2010 – 7.1%; in 2011 – 4.3%; in 2012- 3.9%; in 2013- 2.7%.

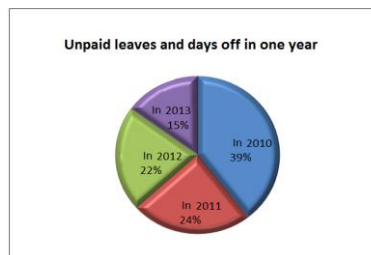


Fig. 20.2.

Changes in job description at the work place

According to the interest of the unit 32.3%
 According to the employee’s abilities 19.1%
 For the employee’s lack of dexterity 28.2%
 For unknown causes 20.4%.

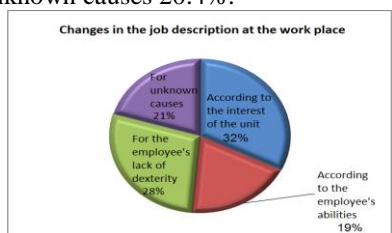


Fig.21.1

Changes in job description at the work place

According to the interest of the unit 31.6%.
 According to the employee’s abilities 10.8%
 For the employee’s lack of dexterity 32.1%
 For unknown causes 25.5%.

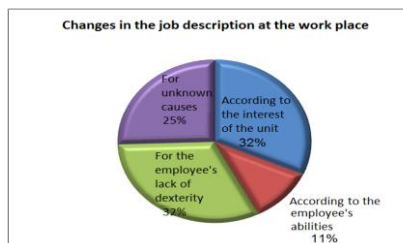


Fig. 21.2.

Sick leaves

In 2010 – 0.6 of which: Cod.110-115 H. T.A= 51% up to 7 days and over 7 days 49%, Cod 120-125 C.I.D= 0.8 up to 7 days 68% and over 7 days 32%.

In 2011- 1.1% of which: Cod.110-115 H T.A= 58% up to 7 days and over 7 days 42%, Cod 120-125 C.I.D= 1.1% up to 7 days 67.2% and over 7 days 32.8%,

In 2012 – 1.8%, of which: Cod.110-115 H.T.A.=

Sick leaves

In 2010 – 3.7%, of which: Cod.110-115 H.T.A.= 51% up to 7 days and over 7 days 49% Cod 120-125 C.I.D.= 2,9%; up to 7 days 68% and over 7 days 32%.

In 2011 – 3.2%, of which: Cod.110-115 H.T.A.= 58% up to 7 days and over 7 days 42%. Cod 120-125 C.I.D.= 2.2%; up to 7 days 67.2% and over 7 days 32.8%,

<p>59.1% up to 7 days and over 7 days 40.9%, Cod.120-125 C.I.D.= 1.6% up to 7 days 71.1% and over 7 days 28.9%, In 2013 – 2.2% of which: Cod.110-115 H.T.A.= 68.4% up to 7 days and over 7 days 31.6%, Cod.120-125 C.D.I.= 2.8%, up to 7 days 72% and over 7 days 38%.</p>	<p>In 2012 – 3.7% of which: Cod.110-115 H.T.A.= 59.1% up to 7 days and over 7 days 40.9%. Cod 120-125 C.I.D.= 3.9%; up to 7 days 71.1% and over 7 days 28.9%, In 2013 – 4.1% of which: Cod.110-115 H.T.A.= 68.4% up to 7 days, over 7 days 31.6%. Cod 120-125 C.D.I.= 3.5%; up to 7 days 72% and over 7 days 38%.</p>
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DISCUSSION

This study emphasizes the influence of occupational risk factors in the occurrence and development of cardiovascular diseases, in two segments of population: **Group I Target**, consisting of 60 subjects not identified with CVDs, of which 30 were employees of a wood-processing plant in Arad City and 30 were patients of an individual medical practice from Arad City; **Group II Case**, 60 subjects selected from a number of 429 patients admitted in the Department of Occupational Diseases and Occupational Medicine from the Arad Emergency Hospital during 2010-2014, diagnosed with cardiovascular diseases. The groups under study were homogenous in terms of number, age and sex.

The analysis of results identifies a percentage of 28.5% showing occupational risk factors, from the total of subjects in the study. The share among male subjects is 51.4%, with an average age of 48. The presence of occupational risk factors differs between the two studied groups. In **Group I Target** they amount to only 31%, the share in males being 62.8%, for an average age of 52, whereas in **Group II Case**, occupational risk factors are identified in a percentage of 69%, of which 65.1% male patients, and an average age of 55. This situation leads to the conclusion that cardiovascular diseases acquired by patients in **Group II Case** were caused to a significant degree by occupational risk factors.

Blood pressure values in subjects of the two studied groups are different: 67.8% of **Group I** are within normal limits, whereas in **Group II** only 36.8% are within normal limits, whereas the others are under antihypertensive treatment. This share is found in male subjects from both groups, the difference residing solely in the age limit – 53 in **Group I** and 56 **Group II**.

Occupational risk factors were investigated in the two studied groups based on an interview, which comprises numerous work-related aspects:

- 1. Duration of working time** 8 hours – 80% of the subjects in **Group I** vs. 55% in **Group II**.
- 2. Break timing at the workplace** – in **Group I** several breaks at 8 hours, for a percentage of 11.7% vs. a percentage of 31% in **Group II**, which might indicate that those diagnosed with CVDs who are professionally active have diminished potential for work.
- 3. Shift timing** – it appears that in **Group I** 66.7% of all subjects work from 7 am to 3 pm, while in **Group II** it can be seen that only 46.2% were working between these hours, while the rest provided services in night shifts from 2 pm to 10 pm and 10 pm to 6 am, which again shows that night shifts can be counted, in

different situations, as a psycho-professional risk factor.

4. The work rate at the work place was identified using three variants: alert, moderate and slow. In **Group I**, 78.3% of those interviewed declared that their work rate was moderate, whereas 65.3% of patients in **Group II** performed moderate work. This situation can be understood through the nature of the work provided, or subjectively, through the capacity of the person providing it, with focus on the ones diagnosed with CVDs.

5. The intensity of physical effort was featured in the study in three variants of response: intense effort, moderate effort, mild effort. In **Group I** 61.2% answered that they provided work with a moderate effort vs. 51.2% in **Group II**. In this situation, too, the difference in percentage from one group to another can be explained both by the nature of work, and subjectively, by the capacity of the person providing it.

6. Monotonous activities – an almost double difference is found between **Group I** and **Group II**, meaning 27.8% and 52.8%, respectively.

7. Imposed or too strictly directed activities – the same finding of a double percentage in **Group II** over **Group I**.

8. Fear of making mistakes with socio-human and economic consequences – similar percentages are found between the two studied groups.

9. Other sources of psychological overstrain – this response warrants particular attention, given a very large difference – 57.8% in **Group II** vs. 27.8% in **Group I**. This can also be due to the impact of knowing the diagnosis by those in **Group II** over subjects in **Group I**.

10. Activities in alternative shifts, during night time or irregular hours, overtime work, work during week-ends – these are found in a larger percentage in **Group II**, and might constitute a determinant in the occurrence of CVDs.

11. Holidays are spent similarly in both groups, excepting holidays abroad in **Group II**, which is not relevant.

12. Unpaid leaves or days off during a work year were recorded almost identically in both groups, as were the changes in job description, less according to the employee's abilities in **Group II** and more for the employee's lack of dexterity, also in **Group II**.

13. Sick leaves were identified by codes: cod.110-115 HTA; cod.120-125 CID. According to the results obtained, a larger number of sick leaves are found in **Group II** than in **Group I**, thus:

- HTA cod.110-115, 0.6% in **Group I** in 2010 vs. 3.7% in **Group II** in the same year

- CID cod.120-125, 0.8% in **Group I** in 2010 vs. 2.9% in **Group II**. This difference is also noted in the other years – 2011, 2012 and 2013. In relation to the statistics of the Arad Department of Public Health, regarding sick leaves and hospital admission at county level, cod.110-115 and 120-125, according to data provided in address 4,918 of 28.11.2014, the results of this study are relevant. A decrease in the number of cases by 1.5% can be noted in 2011, as well as an increase by almost 100% in 2013 as compared to 2011.

From the analysis performed on psycho-professional risk factors in the two studied groups, a greater impact on patients in **Group II** Case is emphasized, due to unfavorable working conditions, prolonged exposure to stress by fear of failing to perform work obligations and achieve the imposed quota.

CONCLUSIONS

This study was based on the latest novelties in the literature. Emphasis was placed on the medical care provided to patients in the Department of Occupational Diseases and Occupational Medicine from the Arad County Clinical Emergency Hospital. The research was conducted depending on actual existing possibilities, through the filter of a future specialist in occupational medicine, and arrived at the following conclusions:

1. The need for both employers and employees to know and comply with the norms established by law no. 319/2006 on security and health in labor.
2. Initiating a set of institutionalized activities, with the purpose of ensuring best working conditions and protecting the life and physical and psychological integrity of participants in a work process.
3. Adjusting work to human physiology, promoting employee health, counseling the employer to identify and evaluate occupational risks.
4. Eliminating supervision of work through cameras – the “big brother” effect – which creates a strong psychological pressure on the employee.

Monitoring work in this way generates stress, which determines cardiovascular diseases to a greater extent.

5. Preventing, identifying, controlling and evaluating the occurrence of occupation-related diseases in a timely manner.

6. Initiating and applying strategies regarding the reduction of working hours, providing services at two work places, eliminating work time flexibility, which entails a feeling of insecurity, dissatisfaction, stress and professional inferiority and uselessness.

7. Directing the patient towards a favorable, healthy behavior, in order to diminish aggressive impact in CVD therapy.

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