



Sudan University of Science & Technology

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Deanship of Development and Quality

# Relationship Between Work Stress, Burnout and Health of Health Care Providers in Accident and Emergency Hospital- Administration of Medical Services

Khartoum State

العلاقة بين ضغوط العمل، فرط التوتر و صحة مقدمي الرعاية الصحية في مستشفى الطوارئ و الصابات-الإدارة العامة للخدمات الطبية

ولاية الخرطوم

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بِسْمِ اللَّهِ الرَّحْمَنِ الرَّحِيمِ



# Dedication

TO

*My father, my mother, my brothers and sisters*

*My grandfather and grandmother*

*My friends and colleagues*

# Acknowledgement

Firstly, I would like to express my greatest thanks to **God** for his blessings in completing this research.

My sincere and deepest gratitude to my supervisor Dr. Adel Abu Elmaali for supporting me during this work.

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# Abstract

This research is questionnaire-based survey, the study was conducted to identify the relationship between work stress, burnout & health among health care providers focused on doctors & nurses in Accident and Emergency Hospital-. The total number of sample = 145 (41 doctors & 104 nurses). The questionnaire consisted of 4 sections (total of 56 variables): 1- general /personal data (type, occupation, working years, type of occupation, duty), 2- stress factors (18 variables), 3-burnout indicators (17 variables), and 4- health problems (16variables). The researcher was analyzed the data by using statistical analysis software program (SPSS "Statistical Package for the Social Sciences) version 20 + Microsoft office Excel 2016. The result of the survey showed that there is relationship between work stress factors & burnout indicators, work stress factors & health problems, burnout indicators & health problems. And the main factor that causes stress is lack of recognition, reward and resources, the main burnout indicator is emotional exhaustion and the main health problem is tiredness. The recommendations are: Good planning of resources is necessary in every day work& especially during critical times, time should also be reserved for listening to the staff & attempting to create opportunities for the employees, increase encouragement & support to staff in the development of their interpersonal, training and job skills and establish appropriate acknowledgement & appreciation of staff efforts in a fair & timely manner, this include appropriate and regular financial compensation as well as employee or team celebrations, recognition.

## المستخلص

اجريت الدراسة لمعرفة العلاقة بين التوتر في العمل، فرط التوتر و صحة مقدمي الرعاية الصحية (تم التركيز علي الاطباء و تقنيي التمريض) في مستشفى الطوارئ و الاصابات - إدارة الخدمات الطبية. العدد الكلي للعينات 145 عينة ( 41 طبيب و 104 تقني تمريض.تم تصميم استبانة لإجراء الدراسة الميدانية و التي تتكون من 4 محاور (56 متغير): 1/ المعلومات الشخصية- العامة (النوع، الوظيفة، سنوات العمل، نوع التوظيف، الوردية) 2/العوامل المسببة للتوتر(18 متغير) 3/ مؤشرات فرط التوتر (17 متغير) 4/ المشاكل الصحية (16 متغير). و لتحليل البيانات تم استخدام البرنامج الاحصائي SPSS + Excel..اظهرت نتائج البحث وجود علاقة بين عوامل التوتر و مؤشرات فرط التوتر و علاقة بين عوامل التوتر و المشاكل الصحية و بين مؤشرات فرط التوتر و المشاكل الصحية.. و وجد كذلك ان نقص التقدير و الترقى المهني و التحفيز هو العامل الاساسي المسبب للتوتر، و الاستنزاف العاطفي هو المؤشر الاساسي لفرط التوتر، و التعب و الإعياء هو المشكلة الصحية الاكثر شيوعا".ومن اهم التوصيات: التخطيط الجيد لاستخدام الموارد في كل يوم وخاصة في لوقات الذروة ، إستقطاع وقت للإستماع للموظفين و محاولة خلق فرص لهم، تشجيعهم و دعمهم و تطوير مهاراتهم الوظيفية و تدريبهم ، و تأسيس طرق للتعبير عن الشكر و العرفان و التقدير لمجهودات الموظفين بطريقة عادلة و ذلك يشمل التحفيز المادي و الإحتفال مع فريق العمل...

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## List of abbreviations

<b>Abbreviation</b>	<b>Definition</b>
<b>HCPs</b>	Health Care Providers
<b>ER</b>	Emergency
<b>HSE</b>	Health & Safety Excusive
<b>CSR</b>	Corporate Social Responsibility
<b>HR</b>	Human Resources
<b>GPs</b>	General Physicians
<b>CMHPs</b>	Common Mental Health Problems



# **CHAPTER ONE**

# **INTRODUCTION**

# Chapter one

## Introduction

### 1.1 Overview

The working environment and the nature of work itself are both important influences on health (Schunck R, 2010). In recent decades' significant changes, closely linked to the organization and management of work, have taken place in the world of work (Chandola, 2010). These have resulted in emerging risks and new challenges in the field of occupational health and safety. Psychosocial risks at the workplace have been identified as significant emerging risks (Leka, 2011). Linked to psychosocial risks, issues such as work-related stress and workplace violence are widely recognized as major challenges to occupational health and safety (Chandola, 2010).

Psychosocial hazards are defined by the International Labour Organization in terms of the interactions among job content, work organization and management, and other environmental and organizational conditions, on the one hand, and the employees' competencies and needs on the other. As such, they refer to those interactions that prove to have a hazardous influence over employees' health through their perceptions and experience (Prieto, 1990). "Throughout the world, most people spend much of their waking hours at work. Work provides a number of economic and other benefits. At the same time, people at work face a variety of hazards owing to chemicals, biological agents, physical factors, adverse ergonomic conditions, allergens, a complex network of safety risks, and many and varied psychosocial factors" (Sultan, 2011). The working environment and the nature of work itself are both important influences on health (Schunck, 2010).

Global socio-political developments of increasing globalization, the establishment of a free market, the changing nature of work, the development of information and communication technology, and significant demographic changes and their impact on the modern workforce characterize the development of the modern workplace (Leka, 2010). In recent decades' significant changes, closely linked to the organization and management of work, have taken place in the world of work (Berntson, 2007) and resulted in emerging risks and new challenges in the field of occupational health and safety. Psychosocial risks at the workplace have been identified as significant emerging risks (Leka, 2011). Linked to psychosocial risks, issues such as work-related stress and workplace violence are widely recognized major challenges to occupational health and safety (Berntson, 2007).

## **1.2 Problem statement**

Many researches on job stress had greatly expanded in recent years. But in spite of this attention, confusion remains about the causes, effects, and prevention of job stress, burnout and its effect in the health.

## **1.3 Research purposes**

Promote\develop the concept of work related stress, burnout and their association with ill-health of staff, and that will help in enhancement the culture of safe and healthy attitude to individuals and groups

## **1.4 Research Objectives**

### **1.4.1 General objective: -**

- 1- To analyze the relationships between work stress, burnout and health status among HCPs in Accident & Emergency Hospital -Khartoum state.

### **1.4.2 Specific objectives: -**

1. To identify work stress factors
2. To analyze burnout indicators
3. To assess main health problems
4. To analyze causal relationships between work stress, burnout and health problems.

## **1.5 Hypothesis: -**

- 1- There is relationship between stress factors & burnout indicators among doctors & nurses in Accident & Emergency Hospital-Khartoum state.
- 2- There is relationship between stress factors & health problems among doctors & nurses in Accident & Emergency Hospital-Khartoum state.
- 3- There is relationship between burnout indicators & health problems among doctors & nurses in Accident & Emergency Hospital -Khartoum state.

**CHAPTER TWO  
LITERATURE  
REVIEW &  
PREVIOUS STUDY**

## **Chapter Two**

### **Literature Review & Previous Studies**

Work stress and burnout are interrelated phenomena, occurring particularly in human service occupations (Schaufeli, 1998). Work stress develops in a situation where the demands on the employee are excessive and where opportunities and aims conflict. Work stress among health care providers (HCPs) often is caused by e.g. new technologies and huge flow of information, financial constraints, shift work, a number of patients with difficult diagnoses, lack of continuous education in hospitals and poor communication (Selmanovic, 2011). Long-term stress has a negative effect on an individual's physical and mental health, and causes deterioration of employees' productivity, and increases the overall costs of the organization (Cooper CL,2001). Previous studies have shown that doubling the workload of medical doctors amplifies work stress significantly and causes multiple health problems (Maslach C.2001). Lack of control over one's work and little support from colleagues and the management can constitute emotional exhaustion and serious health risks for health care workers (Kasperski MJ.2000)

Stress can hit anyone at any level of the business and recent research shows that work related stress is widespread and is not confined to particular sectors, jobs or industries. HSE's formal definition of work related stress is: “The adverse reaction people have to excessive pressures or other types of demand placed on them at work. “Stress is not an illness – it is a state. However, if stress becomes too excessive and prolonged, mental and physical illness may develop. Well-designed, organized and managed work is generally good for us but when insufficient attention to job design, work organization and management has taken place, it can result in work related stress. Work related stress develops because a person is unable to cope with the demands being placed on them. Stress, including work related stress, can be a significant cause of illness and is known to be linked with high levels of sickness absence, staff turnover and other issues such as more errors.

Burnout is a state of emotional, mental, and physical exhaustion caused by excessive and prolonged stress. It occurs when you feel overwhelmed and unable to meet constant demands. As the stress continues, you begin to lose the interest or motivation that led you to take on a certain role in the first place.

Burnout reduces your productivity and saps your energy, leaving you feeling increasingly helpless, hopeless, cynical, and resentful. Eventually, you may feel like you have nothing more to give.

Around half of European workers consider stress to be common in their workplace, and it contributes to around half of all lost working days. Like many other issues surrounding mental health, stress is often misunderstood or stigmatized. However, when viewed as an organizational issue rather than an individual fault, psychosocial risks and stress can be just as manageable as any other workplace safety and health risk.

Psychosocial risks arise from poor work design, organization and management, as well as a poor social context of work, and they may result in negative psychological, physical and social outcomes such as work-related stress, burnout or depression. Some examples of working conditions leading to psychosocial risks are:

- Excessive workloads
- Conflicting demands and lack of role clarity
- Lack of involvement in making decisions that affect the worker and lack of influence over the way the job is done
- Poorly managed organizational change, job insecurity
- Ineffective communication, lack of support from management or colleagues

When considering the job demands, it is important not to confuse psychosocial risks such as excessive workload with conditions where, although stimulating and sometimes challenging, there is a supportive work environment in which workers are well trained and motivated to perform to the best of their ability. A good psychosocial environment enhances good performance and personal development, as well as workers' mental and physical well-being.

Workers experience stress when the demands of their job are excessive and greater than their capacity to cope with them. In addition to mental health problems, workers suffering from prolonged stress can go on to develop serious physical health problems such as cardiovascular disease or musculoskeletal problems.

For the organization, the negative effects include poor overall business performance, increased absenteeism and presentism (workers turning up for work

when sick and unable to function effectively) and increased accident and injury rates. Absences tend to be longer than those arising from other causes and work-related stress may contribute to increased rates of early retirement .

Psychosocial risks go hand in hand with the experience of work-related stress. Work-related stress is the response people may have when presented with work demands and pressures that are not matched to their knowledge and abilities and which challenge their ability to cope (Cox,T.2004). In addition, the issue of burnout has also gained prevalence as a result of exposure to a poor psychosocial environment and the resulting work-related stress experience. Burnout has been defined in the literature as a state of physical, emotional and mental exhaustion that results from long-term involvement in work situations that are emotionally demanding (Halbesleben.2004). Psychosocial risks, work-related stress, violence, harassment, bullying (or mobbing) are now widely recognized major challenges to occupational health and safety (Chandola.2010).

## **2.1 Definitions of stress**

Stress can hit anyone at any level of the business and recent research shows that work related stress is widespread and is not confined to particular sectors, jobs or industries. Stress is not an illness – it is a state. However, if stress becomes too excessive and prolonged, mental and physical illness may develop.

Well-designed, organized and managed work is generally good for us but when insufficient attention to job design, work organization and management has taken place, it can result in Work related stress. Work related stress develops because a person is unable to cope with the demands being placed on them. Stress, including work related stress, can be a significant cause of illness and is known to be linked with high levels of sickness absence, staff turnover and other issues such as more errors.

There is a difference between pressure and stress. Pressure can be positive and a motivating factor, and is often essential in a job. It can help us achieve our goals and perform better. Stress occurs when this pressure becomes excessive. Stress is a natural reaction to too much pressure.

Stress refers to potentially negative physical or mental tensions experienced by a person. A stressor is any event or situation that an individual perceives as a threat; precipitates either adaptation or the stress response. Stress can come from

both good and bad experiences, so the effects of stress can be positive or negative. Stress is not all bad - without stress, there would be no productivity or engagement. Stress becomes a problem when individuals are not able to handle an event or situation and become overwhelmed.

Employers and employees like talk about stress. However, it is often not clear what stress is. Sources of stress are different for everyone. An environmental factor that hinders the work of one employee can help another employee. For example, one employee may like a lot of structure and routine in their day, while another employee may need variety and challenge to stay engaged.

## **2.2 Causes of stress**

HSE has identified six factors that can lead to work related stress if they are not managed properly.

**Demands:** Employees indicate that they are able to cope with the demands of their jobs – this includes issues such as workload, work patterns and the work environment. **Control:** Employees indicate that they are able to have a say about the way they do their work– how much say the person has in the way they do their work. **Support:** Employees indicate that they receive adequate information and support from their colleagues and superiors– this includes the encouragement, sponsorship and resources provided by the organization, line management and colleagues. **Relationships:** Employees indicate that they are not subjected to unacceptable behaviors– this includes promoting positive working to avoid conflict and dealing with unacceptable behavior. **Role:** Employees indicate that they understand their role and responsibilities–whether people understand their role within the organization and whether the organization ensures that they do not have conflicting roles. **Change:** Employees indicate that the organization engages them frequently when undergoing an organizational change– how organizational change (large or small) is managed and communicated in the organization.

It is important to understand each of the six factors and how they are related to each other, as this can influence the amount of stress an individual experience:

- A person can reduce the impact of high demands if they have high control over their work.
- The impact of high demands and low control can be reduced by having high levels of support, either from colleagues or from you as a manager.



- Relationships can be one of the biggest sources of stress, especially where there are problems like bullying and harassment.
- Problems with role are probably the easier problems to solve.
- Change does not have to be at an organizational level to have an impact on individuals or teams, for example, changes in team members, line managers or the type of work or technology used by the team can be just as stressful.

Understanding that these six factors can cause stress for employees can help employers and managers answer the questions:

- Does my organization or team have a problem with stress?
- If 'yes', what do I need to do or change to reduce that stress?
- If 'no' what do, I need to do to prevent stress becoming a problem in the future?

### **2.3 Demand/control and effort/reward relationships**

The major causes of job stress come from problems with conflicts in demand vs. control as well as effort vs. reward. Excessive job stress can be caused by many factors but research shows that some stressors are worse than others. When the demand and control an employee has at work changes, stress results if either factor is not increased or decreased proportionately. The same is true for the relationship between effort and reward. Social support, however, can serve as a buffer for the negative effects of stress and strain on an individual. High demand (e.g., constant deadlines over prolonged periods) and low control (e.g., little choice over the day to day organization of work). High effort (physical or mental) and little reward (compensation, status, financial gain or career enhancement). Organizations need to be aware of the amount of stress their employees are experiencing. Changes to the organization can make for a more mentally healthy workplace, especially when employees feel appropriately rewarded for their effort and in control of their work.

### **2.4 Balancing demands and pressures with skills and knowledge**

A person experiences stress when they perceive that the demands of their work are greater than their ability to cope. Coping means balancing the demands and pressures placed on you (i.e. the job requirements) with your skills and knowledge (i.e. your capabilities). For example, if you give a member of your team a tight deadline on a project they feel they have neither the skills nor ability to do well, they may begin to feel undue pressure which could result in work related stress.

Stress can also result from having too few demands, as people will become bored, feel undervalued and lack recognition. If they feel they have little or no say over the work they do or how they do it, this may cause them stress.

## **2.5 Factors in stress**

Stress affects people in different ways and what one person finds stressful can be normal to another. With each new situation a person will decide what the challenge is and whether they have the resources to cope. If they decide they don't have the resources, they will begin to feel stressed. How they appraise the situation will depend on various factors, including:

Their background and culture, their skills and experience, their personality, their personal circumstances, their individual characteristics, their health status, their ethnicity, gender, age or disability and Other demands both in and outside work. (Arnold,2005)

## **2.6 Signs and Symptoms**

Stress can cause changes in those experiencing it. In some cases, there are clear signs that people are experiencing stress at work and if these can be identified early, action can be taken before the pressure becomes a problem. This may make it easier to reduce and eliminate the causes. It is important that everyone looks out for changes in a person's or a group's behavior. However, in many cases the changes may only be noticeable to the person subject to the stress and so it is also important to look at how you are feeling and try to identify any potential issues you may have as early as possible and take positive action to address them; this may be raising the matter with a line manager, talking to an occupational health professional

Stress can show itself in many different ways. Some of the items in this list may not be signs of stress if people always behave this way. Managers may need to manage staff exhibiting some of these signs differently: -

*Head and mental health* Short term effects: Anxious, changed moods, negative thoughts, more emotional, disturbed sleep patterns, long term effects: Anxiety, depression. *Heart, lungs and circulation* Short term effects: Changes in heart rate, increased blood pressure, Long term effects: Hypertension, heart disease. *Skin* Short term effects: Sweating, reddening, blushing, long term effects: Eczema, psoriasis. *Metabolism* Short term effects: Mobilization of energy sources,

increased cholesterol in blood, increased glucose availability, Long term effects: Inefficient energy use, increased fat deposition, insulin resistance, metabolic syndrome. *Muscles and joints* Short term effects: Increased blood flow to muscles, muscle tension, long term effects: Loss of muscle function and structure, stiffness, soreness, regional pain syndromes, osteoporosis. *Digestive system and gut* Short term effects: ‘Butterflies’ in stomach, dry mouth, suppression of digestion, Long term effects: Suppression, impaired capacity to repair ulcers, chronic dysfunction of the gut such as Irritable Bowel Syndrome. *Reproduction and growth* Suppression of reproductive and growth systems (hormones), Long term effects: Reproductive abnormalities, decreased testosterone and erectile dysfunction, loss of libido. *Immune system* Short term effects: enhancement of specific immune Responses, Long term effects: Eventual immune suppression increased susceptibility to some infectious diseases (Von Onciul, 1996)

## **2.7 Signs of stress in individuals**

Suffering from some of the following symptoms it may indicate that you are feeling the effects of stress. If you find that work or aspects of your work bring on or make these symptoms worse, speak to your line manager, trade union representative or your HR department. It may be that some action taken at an early stage will ease the stress and reduce or stop the symptoms.

*Emotional symptoms* Negative or depressive feeling, disappointment with yourself, increased emotional reactions - more tearful or sensitive or aggressive, loneliness, withdrawn, loss of motivation commitment and confidence and mood swings (not behavioral). *Mental* Confusion, indecision, Can’t concentrate and Poor memory. *Changes from your normal behavior* changes in eating habits, increased smoking, mood swings effecting your behavior, changes in sleep patterns, twitchy, nervous behavior *and* changes in attendance such as arriving later or taking more time off.

## **2.8 Signs of stress in a group**

Disputes and disaffection within the group, increase in staff turnover, increase in complaints and grievances, increased sickness absence, increased reports of stress, difficulty in attracting new staff, poor performance and customer dissatisfaction or complaints.

It is not up to you or your managers to diagnose stress. It is up to you and your managers to recognize that behaviors have changed are aware that

something is wrong and take prompt action. Take care not to over react to small changes in behavior. You and your managers need to act when these behavioral changes continue.

## **2.9 Why should you take action?**

There are many good reasons for tackling stress in the workplace, and everyone has a part to play, at every level of the organization. Here you can find out:

The benefits to individuals, teams and the organization, the legal requirements, how tackling stress is a major part of your organization's Corporate Social Responsibility (CSR) and who is responsible for dealing with work related stress.

### **2.9.1 Benefits to individual, team and organization**

Economic benefits, benefits for individuals and management benefits

#### **2.9.1.1 Economic benefits**

Lower risks of litigation – because they comply with legal duties, improved return on investment in training and development, improved customer care and relationships with clients and suppliers **and** reduced costs of sick pay, sickness cover, overtime and recruitment.

#### **2.9.1.2 Benefits for individuals**

People feel more motivated and committed to their work, morale is high, people work harder and perform better – increasing their earning power, people feel that they are part of a team and the decision-making process, so accept change better. relationships – with managers and within teams – are better, people are happy in their work and don't want to leave, line managers can outwardly show their duty of care and line Managers can demonstrate good management skills that could help their promo ability and career development.

#### **2.9.1.3 Management benefits**

Reduced staff turnover and intention to leave, so improving retention, better absence management, fewer days lost to sickness and absenteeism, fewer accidents, improved work quality, improved organizational image and reputation and better staff understanding and tolerance of others experiencing problems

## **2.9.2 Legal requirement**

At board level, human Resources and Health and Safety managers, line managers and employees, Individuals should always seek legal advice relevant to the particular circumstances they are experiencing. For example, in England all employers have legal responsibility under the Health and Safety at Work Act 1974 and Management of Health and Safety at Work Regulations 1999 to ensure the health safety and welfare at work of their employees. This includes minimizing the risk of stress-related illness or injury to employees.

### **2.9.2.1 At board level**

Directors need to consider how they will:

Monitor factors that might suggest there is a problem with stress-related illness in the business, for example, high rates of absenteeism, staff turnover, poor performance, conflict between staff, ensure there is a health and safety policy that addresses the issue of stress in the workplace, including, if appropriate, a stress management strategy, ensure effective risk assessments have been carried out, are monitored regularly and any recommendations are being implemented and adequately funded and plan for stress-related risks when embarking on significant organizational change.

### **2.9.2.2 Human Resources and Health and Safety managers**

HR and Health and Safety Managers have an important role in assisting employers to proactively address work related stress, and in doing so reduce the likelihood of employees suffering from work related stress. Depending on the structure of the organization, HR and Health and Safety managers may wish to consider how they will:

Keep up to date with best practice relating to work related stress, conduct and review risk assessments, find out about specific issues that may indicate that risk assessments need reviewing or updating – such as evidence of an employee suffering stress or larger management changes to the business, provide information to employees about stress-related illnesses and their obligations to inform managers about risks at work, feedback any wider concerns about risks to health from stress at work to board level, examine stress as a possible factor in relation to frequent or long-term absenteeism for individual employees and report their concerns to appropriate senior personnel while maintaining any obligations of confidentiality.

### **2.9.2.3 Line managers**

From a line manager's perspective, legal responsibility rests primarily with the 'employer' who is responsible not only for action or lack of action at board level but also for all those employed by him. Line managers have an important role in assisting employers to proactively address work related stress, and in doing so reduce the likelihood of employees suffering from work related stress. Examples of issues line managers may wish to consider include:

Whether stress may be a factor in relation to frequent or long-term absenteeism for individual employees, how they will monitor and address potential sources of stress and report their concerns to appropriate senior personnel while maintaining any obligations of confidentiality.

### **2.9.2.4 Employees**

Employees also have a duty to take reasonable care for their own health and safety and of others who may be affected by their actions, employees should:

Inform their employer if they feel the pressure of the job is putting them or anyone else at risk of ill health, suggest ways in which the work might be organized to alleviate the stress, inform their employer if they are suffering from a medical condition that appears to be long-term and is affecting their ability to carry out day to day tasks, including memory and learning and discuss any reasonable adjustments that could be made to assist them in performing their job.

## **2.10 Management Standards for work related stress**

The Management Standards define the characteristics, or culture, of an organization where the risks from work related stress are being effectively managed and controlled. The Management Standards cover key areas of work design that, if not properly managed, are associated with poor health and well-being, lower productivity and increased sickness absence. The Management Standards represent a set of conditions that, if present, reflect a high level of health well-being and organizational performance: -

Demonstrate good practice through a step by step risk assessment approach, allow assessment of the current situation using surveys and other techniques, promote active discussion and working in partnership with employees to help decide on practical improvements that can be made, help simplify risk assessment for work related stress by:

- identifying the main risk factors for work related stress;
- helping employers focus on the underlying causes and their prevention; and
- Providing a yardstick by which organizations can gauge their performance in tackling the key causes of stress (Cox,T. 1993).

## **2.11 Dealing with personal issues**

Stress can be an unnoticed and gradual buildup of the many pressures experienced in work, at home and in everyday life. Most people are able to cope with the big issues in life and can find them exciting but for some they are too demanding or combined with everything else going on, they can become overwhelming, resulting in stress. Stress effects people in different ways that can either be dealt with or if not spotted or understood, or adequately tackled lead to more problems both physical and mental (Nucci,L.1981).

## **2.12 Dealing with stress**

Stress is not an illness but if it becomes excessive and/or prolonged, mental and physical illness may develop. Work is generally good for people if it is well designed, but it can also be a great source of pressure. Pressure can be positive and a motivating factor, it can help us achieve our goals and perform better. Stress is a natural reaction when this pressure becomes excessive (Friedman.2000).

## **2.13 Burnout**

Burnout has become a synonym for psychosomatic, psychological symptoms and social consequences of a long-lasting workload exceeding an individual's capacity (Hillert.2008). Burnout is the result of chronic stress (at the workplace) which has not been successfully dealt with, characterized by exhaustion and depersonalization (negativism/cynicism) and is found predominantly in caring and social professions (Maslach and Jackson.1981) Burnout is not only limited to the health services, the basic structure of burnout is the same across occupations, namely the combination of exhaustion and withdrawal. In health service work these dimensions are related to working with people, since they constitute the object of the employee's job, and manifest themselves in exhaustion resulting from interpersonal strain (emotional exhaustion) and withdrawal from recipients (depersonalization). In other professions the core symptoms of burnout manifest themselves as exhaustion and withdrawal (cynicism) from work in general (Schaufeli,2005).

Although there is no universally accepted definition of burnout, most researchers define it as a state of physical, emotional and mental exhaustion that results from long-term involvement in work situations that are emotionally demanding (Schaufeli.2001). The lack of a binding definition and the difficulty in separating burnout from other health disorders are major problems for research and practice. Anyone can experience job burnout. However, professions with high job demands and few supports can increase the prevalence of burnout and reduce engagement. Helping professions, such as jobs in health care, teaching or counseling, often have high rates of burnout.

### **2.13.1 Burnout characteristics**

1. exhaustion (i.e. the depletion or draining of mental resources)
2. cynicism (i.e. indifference or a distant attitude towards one's job)
3. lack of professional efficacy (i.e. the tendency to evaluate one's work performance negatively, resulting in feelings of insufficiency and poor job-related self-esteem)

Anyone can experience job burnout. However, working in professions with high job demands and few supports can increase the prevalence of burnout and reduce engagement.

### **2.13.2 Causes of job burnout**

- Lack of control: This is an employee's lack of influence on decisions that affect their job. Examples include hours of work, which assignments they receive, and an inability to control the amount of work that comes in.
- Unclear job expectations: Examples include uncertainty over what degree of authority an employee has and not having the necessary resources to complete work.
- Dysfunctional workplace dynamics: Examples include working with an office bully, being undermined by colleagues or having a boss who micromanages your work.
- Mismatch in values: If personal values differ from the way an organization does business or handles employee grievances, it will wear on employees.
- Poor job fit: An employee working in a job that doesn't fit their interests and skills is certain to become more and more stressed over time.
- Extremes of activity: When a job is always monotonous or chaotic, an employee needs constant energy to remain focused, leading to energy drain and job burnout.



Burnout can stem from many negative conditions at work. Examples of these conditions include low levels of control and support from co-workers and supervisors, job dissatisfaction and low organizational commitment. Job dissatisfaction, reduced self-efficacy, and low levels of workplace peer support in particular can lead to higher levels of cynicism.(Schaufeli.1993).

Employees are at a higher risk of job burnout if they:

Feel so pressured to complete high amounts of work that they do not have a balance between work and personal life, try to be everything to everyone, have little variety and are bored with their job and think they have minimal control over work. Although burnout is common, depending on the profession, it should not be taken lightly. Burnout can be hazardous to an employee's health. It is positively related to many mental and physical health problems, including depression, anxiety and psychosomatic health complaints. The health problems that accompany burnout are linked to extreme exhaustion. People experiencing burnout should be encouraged to see a health professional (A.Shirom, 2001).

## **2.14 Health**

### **2.14.1 Mental Health and Mental Illness**

*Mental health* is a state of well-being in which the individual realizes his or her own abilities, can cope with the normal stresses of life, can work productively and fruitfully and is able to make a contribution to his or her community (Schaufeli.1998). *Mental illness* is a recognized, medically diagnosable illness that results in the significant impairment of an individual's cognitive, affective or relational abilities. Mental disorders result from biological, developmental and/or psychosocial factors and can be managed using approaches comparable to those applied to physical disease (i.e., prevention, diagnosis, treatment and rehabilitation) (WHO.2001).

Although the terms are often used interchangeably, mental health and mental illness is not the same thing; but they are also not mutually exclusive. A fundamental difference between mental health and mental illness is that everyone has some level of mental health all of the time, just like physical health, whereas it is possible to be without mental illness. Mental health and mental illness are found on two separate continuums. Optimal mental health often referred to as mental well-being or mental wellness, is at one end of the continuum, while poor mental health, also referred to as languishing, and is at the other end. On the horizontal

axis, having a serious mental illness is at one end of the continuum, while having no symptoms of a mental illness is at the other end. Ultimately, this means that someone can be mentally healthy with a mental illness and that someone can have poor mental health without a mental illness. That is illustrated in figure below:-

(Figure No. 2.14.1)



Despite poor mental health not defined as illness, having poor mental health is associated with emotional distress and psychosocial impairment comparable to that of a major depressive episode (EPP.1988). The effects of poor mental health are both severe and prevalent, with poor mental health being more common than depression.

### **2.14.2 The three most significant determinants of mental health are:**

Social inclusion, freedom from discrimination and violence and access to economic resources. These factors are inextricably intertwined with employment. As workplaces develop mental health promotion programs, these determinants must be addressed in the programming (Corey.2003).

### **2.14.3 Mental health is not static**

It is important to remember that mental health and mental illness are not static; they change over time depending on many factors. Some of the factors that influence mental health include: levels of personal and workplace stress; lifestyle and health behaviors; exposure to trauma; and genetics. When the demands placed on any individual exceed their resources and coping abilities, their mental health will be negatively affected. Two examples of common demands that have the ability to wear away at people are:

- i) working long hours under difficult circumstances, and
- ii) Caring for a chronically ill relative. Economic hardship, unemployment, underemployment and poverty also have the potential to undermine mental health. In fact, three out of 10 Canadian employees report that their work environments are not psychologically safe or healthy (Keleher.2006).

## **2.15 Stress and mental health at work**

*Work related stress* is the adverse reaction people have to excessive pressures or other types of demand placed on them at work. *Mental health* is how we think, feel and behave.

**Common mental health problems** are those that:

- are most frequent and more prevalent; and
- are successfully treated in primary care settings like GPs rather than by specialists such as Psychiatrists

*Anxiety* is an unpleasant feeling when you feel worried, uneasy or distressed about something that may or may not be about to happen. *Depression* is when you have feelings of extreme sadness, despair or inadequacy that last for a long time.

## **2.16 Common mental health problems (CMHPs)**

One person in four in the UK will have a mental health problem at some point in their life. While mental health problems are common, most are mild. The family doctor and primary healthcare team can usually deal with them without referring the person for specialist help.

Anxiety and depression are the most common mental health problems, often these are a reaction to a difficult life event, for example moving house, bereavement, or problems at work.

CMHPs tend to be short-term and are generally treated by medication from a GP. The GP will review this treatment and if there is no improvement, consider referring to a specialist.

### **2.16.1 How CMHPs and work related stress go together**

Work related stress and mental health often go together. The symptoms of stress and common mental health problems are similar, for example, loss of appetite, fatigue and tearfulness can be symptoms of both. Work related stress may trigger an existing mental health problem that the person may otherwise have successfully managed without letting it affect their work. People with existing mental health issues, work related stress may worsen their problem. If work related stress reaches a point where it has triggered an existing mental health problem, it becomes hard to separate one from the other.

### **2.16.2 How CMHPs and work related stress are different**

Common mental health problems and stress can exist independently, people can have work related stress and physical changes such as high blood pressure, without experiencing anxiety and depression. They can also have anxiety and depression without experiencing stress. The key difference between the two is their cause and the way they are treated.

Stress at work is a reaction to events or experiences at work. CMHPs can arise through causes outside work, e.g. bereavement, divorce, postnatal depression or a family history of the problem. However, people can have CMHPs with no obvious causes.

Organizations can manage and prevent stress by improving conditions at work. Doctors usually treat common mental health problems by prescribing medication.

However, you and your managers have a role in making adjustments and helping the person to manage the problem at work.

### **2.16.3 Mental health problems**

In practice, it can be hard to distinguish when ‘stress’ turns into a ‘mental health problem’ and when existing mental health problems become exaggerated by stress at work. Many of the symptoms are similar to those that people experience when they are under considerable pressure; the key differences are in the severity and duration of the symptoms and the impact they have on someone’s everyday life.

### **2.16.4 Dealing with mental health**

If you already feel under pressure, it’s hard to distinguish when that ‘stress’ turns into a ‘mental health problem’ and when an existing mental health problem becomes aggravated by stress at work. Many of the symptoms of stress and a mental health condition are similar; the key differences are in the severity and duration of the symptoms and the impact they have on your everyday life. The majority of people with mental health problems are diagnosed and treated by their GP and most continue to work productively. In fact, evidence shows that staying in work can be of great benefit to those affected.

### **2.16.5 Take action at an early stage**

If you feel you have a problem the earlier, you take action the better; early action can help prevent you becoming more unwell. Line managers and colleagues can also play a key role in identifying when you are behaving out of character, so be co-operative if your line manager approaches you.

## **2.17 mental illnesses**

Mental illness is a recognized, medically diagnosable illness that results in the significant impairment of an individual's cognitive, affective or relational abilities. Mental disorders result from biological, developmental and/or psychosocial factors and can be managed using approaches comparable to those applied to physical disease (i.e., prevention, diagnosis, treatment and rehabilitation).

### 2.17.1 Types of mental illnesses

There are many different types of mental illnesses, just as there are many types of physical illness. Some of the defining characteristics of a mental illness are:

That it is a recognized medically diagnosable illness, that it can cause significant cognitive, affective, or relational impairment, that it results from biological, developmental and/or psychosocial factors and that it can be managed using physical disease approaches (i.e. prevention, diagnosis, treatment and rehabilitation). As time passes, more mental illnesses are being discovered and diagnosed. Some of the more common and well researched mental illnesses, by category of illness, include: -

- Mood disorders (affective disorders): Depression, mania and bipolar
- Anxiety disorders: Generalized anxiety disorder, post-traumatic stress disorder, obsessive-compulsive disorder, panic disorder
- Psychotic disorders: schizophrenia
- Concurrent disorders: addictions and substance abuse
- Personality disorders: antisocial personality disorder, obsessive-compulsive personality disorder

Mental illness is much like diabetes, heart disease and a broken leg — one can live with it and recover from it. Recovery is not an end state; it does not mean that the individual no longer has depression, schizophrenia or another mental illness. Recovery means that the person has stabilized and regained their role in society (Edelman. 2009). Learning more about mental health and mental illness is a crucial step in dispelling stigma, stopping prejudice and promoting early identification and effective treatment.

Both physical and mental health is the result of a complex interplay between many individual and environmental factors, including:

- family history of illness and disease/genetics
- lifestyle and health behaviors (e.g., smoking, exercise, substance use)
- levels of personal and workplace stress
- exposure to toxins
- exposure to trauma
- personal life circumstances and history
- access to supports (e.g., timely healthcare, social supports)
- coping skill

### **2.17.2 Psychological safety and health**

The Canadian Oxford Dictionary defines psychological as "of, relating to, affecting, or arising in the mind". The concept of "psychological safety" involves preventing injury to the mental well-being of workers. A psychologically safe and healthy workplace is one that promotes workers' mental well-being and does not harm employee mental health through negligent, reckless or intentional ways. For example, a psychologically safe workplace would be free of excessive fear or chronic anxiety.

### **2.17.3 Difference between a mentally healthy workplace and a psychologically healthy workplace**

Psychologically healthy workplaces and mentally healthy workplaces both describe the same high-functioning, respectful and productive workplace. The term "psychologically healthy workplace" is often used when talking about preventing psychological injuries (e.g. stress-related emotional conditions resulting from real or imagined threats or injuries). The term "mentally healthy workplace" is often used within the context of mental health promotion and is viewed as a strategy used to reduce risk factors for developing mental illness.

### **2.17.4 How do psychosocial risk factors in the workplace affect employee health?**

Workplaces have traditionally looked at workplace health from a strictly occupational health and safety perspective. To have a complete or comprehensive approach, workplaces should also consider measures that may impact the mental health of worker. There is strong evidence that certain features of the workplace can affect employees' mental and physical health. These factors include demoralization, depressed mood, anxiety, burnout, etc. These factors increase the likelihood that an individual will experience increased stress, which in turn increases the likelihood of developing or worsening a mental disorder.

Psychological health problems can range widely, from mild psychological difficulties such as low mood, sleep difficulties, or excessive worry to severe psychological disorders such as schizophrenia, bipolar disorder, or severe depression. Because milder psychological health problems are far more common in the workplace, they account for a larger percentage of the negative impacts on employees and employers. Mental distress that has not reached the level of a diagnosable mental disorder can still be a source of considerable suffering. It is possible that workplace factors may increase the likelihood of the occurrence of a

mental disorder, make an existing disorder worse, and impede effective treatment and rehabilitation. On the other hand, a supportive work environment can reduce the onset, severity, impact and duration of a mental health disorder (Government of Ontario.2009).

## **2.18 Previous studies**

Comprehensive literature review was done; the researcher went through reliable websites, e.g. [www.pubmed.com](http://www.pubmed.com), [www.hse.gov.uk](http://www.hse.gov.uk), [www.hsa.ie](http://www.hsa.ie) etc.

### **1-Work stress, occupational burnout and depression levels: a clinical study of pediatric intensive care unit nurses in Taiwan. 2016 Feb 23**

**By: Lin TC, Lin HS, Cheng SF, Wu LM, Ou-Yang MC.**

**Abstract:** Aims and objectives: This study aimed to examine the relationship between work stress and depression; and investigate the mediating effect of occupational burnout among nurses in pediatric intensive care units. Background: The relationships among work stress, occupational burnout and depression level have been explored, neither regarding occupational burnout as the mediating role that causes work stress to induce depression nor considering the pediatric intensive care unit context. Results: The results indicated that after controlling for individual demographic variables, the correlations of work stress with occupational burnout, as well as work stress and occupational burnout with depression level were all positive. Furthermore, occupational burnout may exert a partial mediating effect on the relationship between work stress and depression level. Conclusion: This study provides information about work stress, occupational burnout and depression level, and their correlations, as well as the mediating role of occupational burnout among pediatric intensive care unit nurses.

### **2- Analysis of structural relationship among the occupational dysfunction on the psychological problem in healthcare workers: a study using structural equation modeling.** By: Teraoka M and Kyougoku M

#### **Abstract**

Purpose: The purpose of this study is to demonstrate the hypothetical model based on structural relationship with the occupational dysfunction on psychological problems (stress response, burnout syndrome, and depression) in healthcare workers. Conclusion: Our findings indicate that psychological problems are



associated with occupational dysfunction in healthcare workers. Reduction of occupational dysfunction might be a strategy of better preventive occupational therapies for healthcare workers with psychological problems. However, longitudinal studies will be needed to determine a causal relationship.

### **3- [Structural equation modeling on burnout in clinical nurses based on CS-CF model]. [Article in Korean] BY: Kim HJ, Yom YH.**

#### **Abstract**

**Purpose:** The purpose of this study was to construct and test a structural equation modeling on burnout of clinical nurses based on CS-CF model (Compassion Satisfaction and Compassion Fatigue). **Methods:** A survey using a structured questionnaire was conducted with 557 clinical nurses. Data were analyzed using structural equation modeling. **Conclusion:** Results of this study suggest that compassion fatigue must be decreased and compassion satisfaction has to be increased, while burnout is lowered by enhancing the clinical nursing work environment, patient safety culture and resilience. In addition, more variables and longitudinal studies are necessary to validate the clear cause-and-effect relationship between the relevant variables.

### **4-The relationship between work stress and oral health status**

**By: Wagner Segura Marcenes, Aubrey Sheiham.**

#### **Abstract**

This study investigated whether oral health status is associated with work stress. 164 male workers aged from 35 to 44 years, equally distributed over four socio-economic groups took part in the study. Three work characteristics related to stress were studied: mental demand, control and variety. Age, socio-economic status, sugar consumption, frequency of dental attendance, tooth brushing frequency, type of toothpaste used, years of residence in Belo Horizonte and marital quality were considered in the data analysis. The results of simple regression analysis (dental caries data) and simple logistic regression analysis (periodontal data) showed a significant relationship between periodontal health status and work-related mental demand ( $P < 0.001$ ), marital quality ( $P < 0.01$ ) and socio-economic status ( $P < 0.05$ ). Dental caries status was significantly associated with age ( $P < 0.001$ ), socio-economic status ( $P < 0.05$ ), sugar consumption ( $P < 0.01$ ) and marital quality ( $P <$

0.0001). Socio-economic status did not remain significantly associated with dental caries after adjusting for all the variables studied.

**5-Occupational sources of stress: a review of the literature relating to coronary heart disease and mental ill health-** By: Cary I. Cooper and Judi Marshall-Article first published online: 17 AUG 2011, The British Psychological Society

**Abstract**

A great deal of research has been conducted over recent years in the field of occupational stress and its relationship to physical and mental illness. This paper attempts to provide a framework for examining this work, with the dual objectives of broadening the existing psychological literature with the extensive medical data available and also highlighting the research gaps in this area. By emphasizing the medical evidence, it is hoped that we may encourage greater interdisciplinary work in the growing field of stress at work.

**CHAPTER THREE**  
**RESEARCH**  
**METHODOLOGY**

## **Chapter three**

### **Research Methodology**

**3.1 Study design** this is descriptive cross sectional hospital based study conducted in Accident & Emergency Hospital, -Khartoum state, which was conducted during May 2016.

**3.2 Study population** Medical health providers in Accident & Emergency Hospital, -Khartoum state, there are 154 nurses and 86 doctors (total (N= 240).

**3.2.1 Inclusion criteria** Doctors & nurses in Accident & Emergency Hospital, -Khartoum state.

**3.2.2 Exclusion criteria** Other health care providers in Accident & Emergency Hospital, -Khartoum state.

**3.3 Study area** The study was conducted in Accident & Emergency Hospital, -Khartoum state; it is one of the medical institutions under the general administration for medical Services-Military hospital. It's located in Omdurman locality, on the west bank of the White Nile, near Omdurman old bridge.

#### **3.4 Sampling**

**3.4.1 Sample size:** The researcher was calculated the sample size according to the equation  $[n = z^2 p q / \sigma^2]$  "with confidence level 95% ", then staff (doctors+ nurses) in Accident & Emergency Hospital, -Khartoum state (n=150).

**3.4.2 Data collection tools** data was collected by using: -

Questionnaires for health worker providers (doctors & nurses) in Accident & Emergency Hospital, -Khartoum state. The questionnaire consisted of 4 sections (total of 56 variables): 1- general /personal data (type, occupation, working years, type of occupation, duty), 2- stress factors (18 variables), 3- burnout indicators (17 variables), and 4- health problems (16variables). In the second and third parts the researcher was used Likert scale [usually=1, rarely=2 and never=3] for data analysis. Health problems were assessed on the scale 1...3, where: 1-discomfort has caused work disability, 2- work ability is affected, and 3-work ability is not affected.

**3.4.3 data analysis** The researcher was analyzed the data by using statistical analysis software program (SPSS "Statistical Package for the Social Sciences) version 20 + Microsoft office Excel 2016.

### **3.5 Ethical consideration:**

Informed consent from planning & research directorate and from training directorate in the general administration for medical services- Omdurman military hospital and from all respondents in Accident & Emergency hospital- Khartoum state.

# **CHAPTER FOUR**

## **RESULTS**

# Chapter four

## Results

### 4.1 Data collection results: -

Questionnaire was distributed with an explanation of the survey purpose & guarantee of response confidentiality. During the survey a total of 150 questionnaires were distributed, 145 were filled (response rate 96.7 %)

### 4.2 Personal information: -

#### 4.2.1 Type:

Type	Frequency	Percent
male	30	20.7
female	115	79.3
Total	145	100.0

Table No. 4.2.1

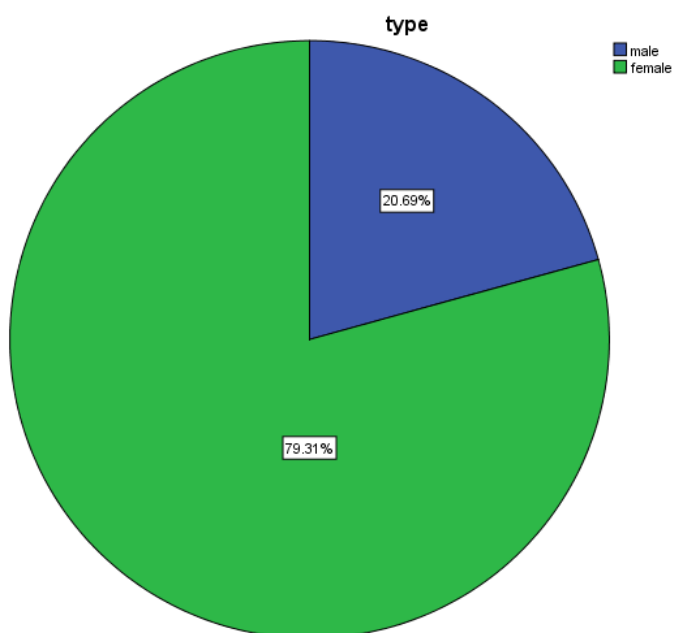


Figure No. 4.2.1

## 4.2.2 Occupation:

Occupation	Frequency	Percent
doctor	41	28.3
nurse	104	71.7
Total	145	100.0

Table No. 4.2.2

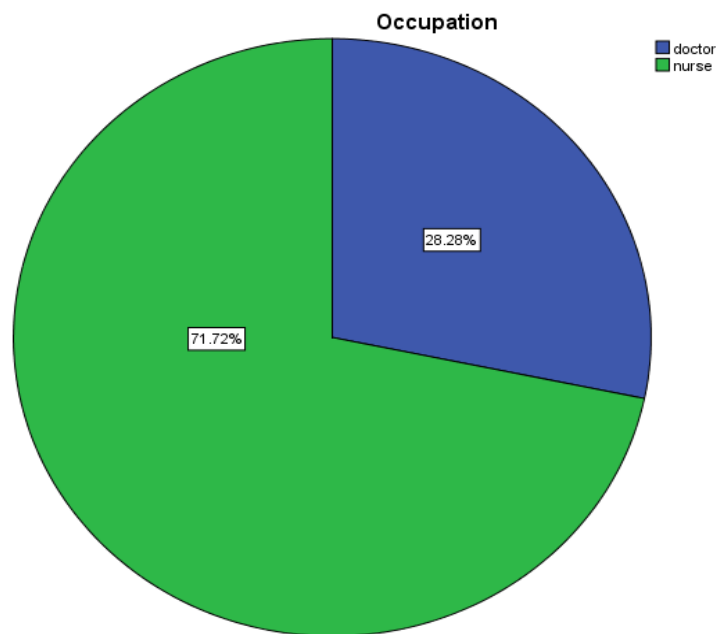


Figure 4.2.2



### 4.2.3 Working years:

Working years	Frequency	Percent
less than 5 years	111	76.6
5-10 years	30	20.7
more than 10 years	4	2.8
Total	145	100.0

Figure 4.2.3

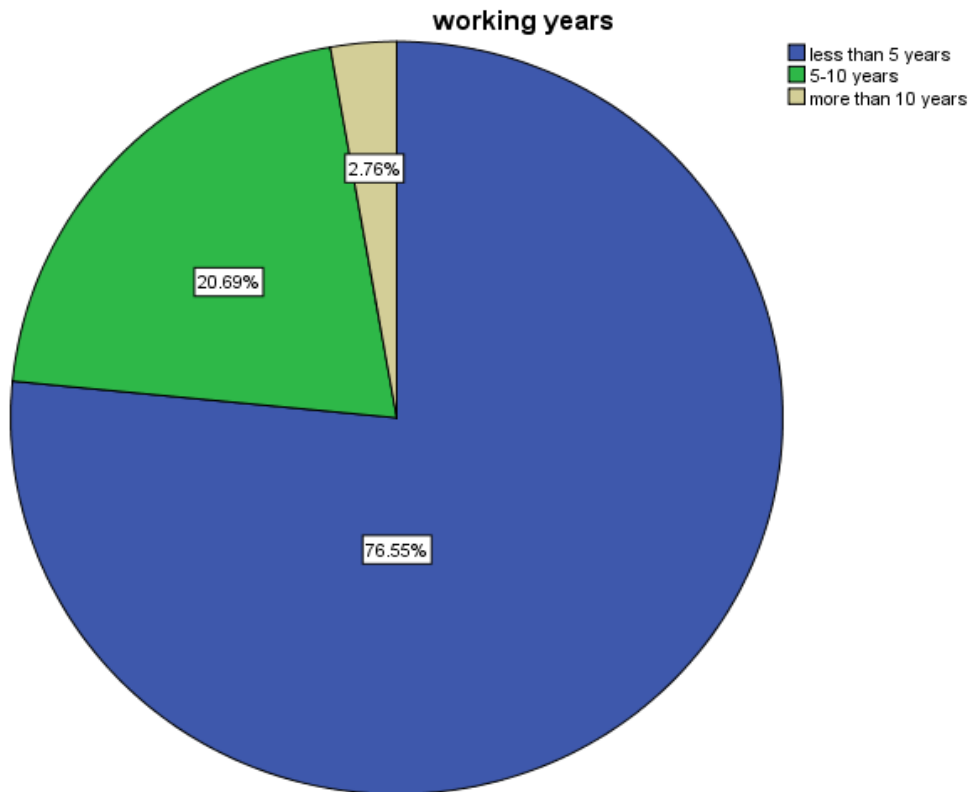


Figure  
4.2.3

#### 4.2.4 Type of occupation:

Type of occupation	Frequency	Percent
military	29	20.0
not military	116	80.0
Total	145	100.0

Table No. 4.2.4

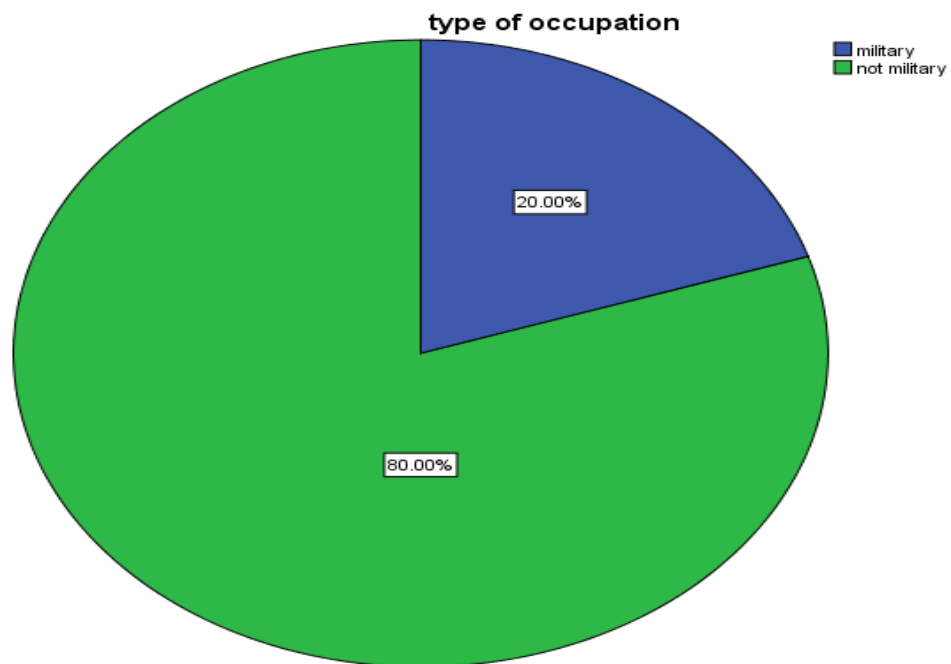


Figure No. 4.2.4

#### 4.2.5 Duty:

Duty	Frequency	Percent
first	106	73.1
second	39	26.9
Total	145	100.0

Table No. 4.2.5

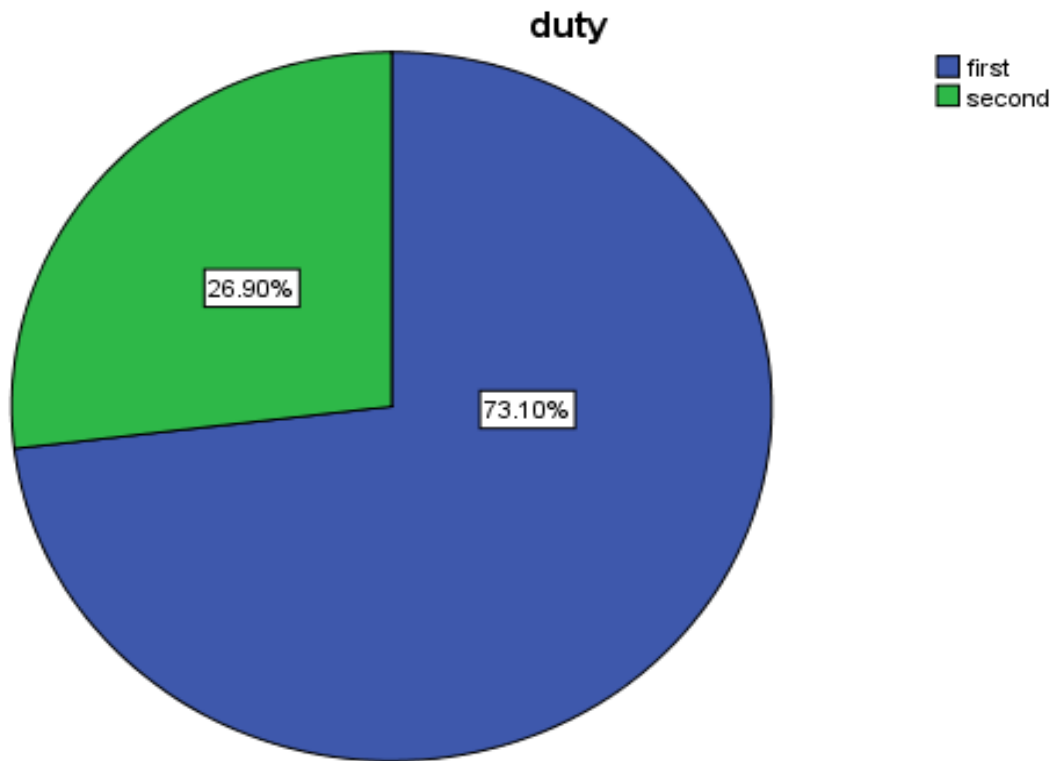


Figure No, 4.2.5

### 4.3 Frequency tables:

#### 4.3.1 Lack of career, recognition & resources

	Frequency	Percent
usually	28	19.3
rarely	88	60.7
never	29	20.0
Total	145	100.0

Table No. 4.3.1

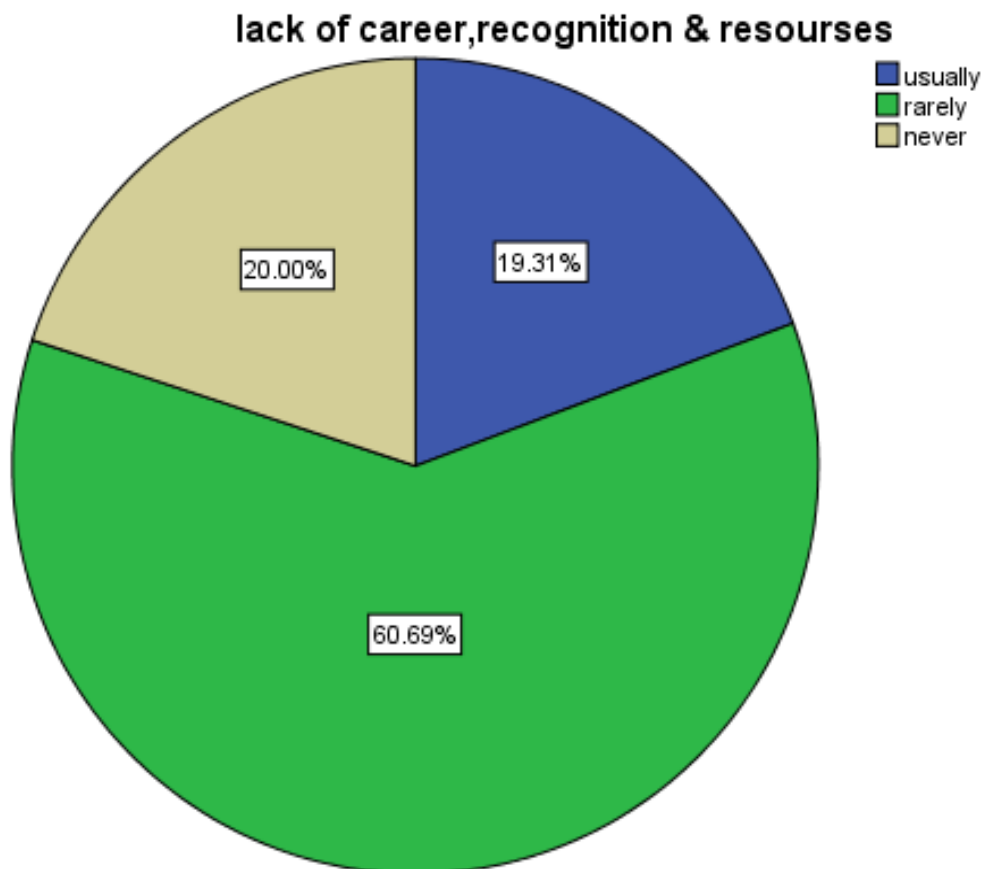


Figure No. 4.3.1

### 4.3.2 Lack of team work & training

	Frequency	Percent
usually	27	18.6
rarely	73	50.3
never	45	31.0
Total	145	100.0

Table No. 4.3.2

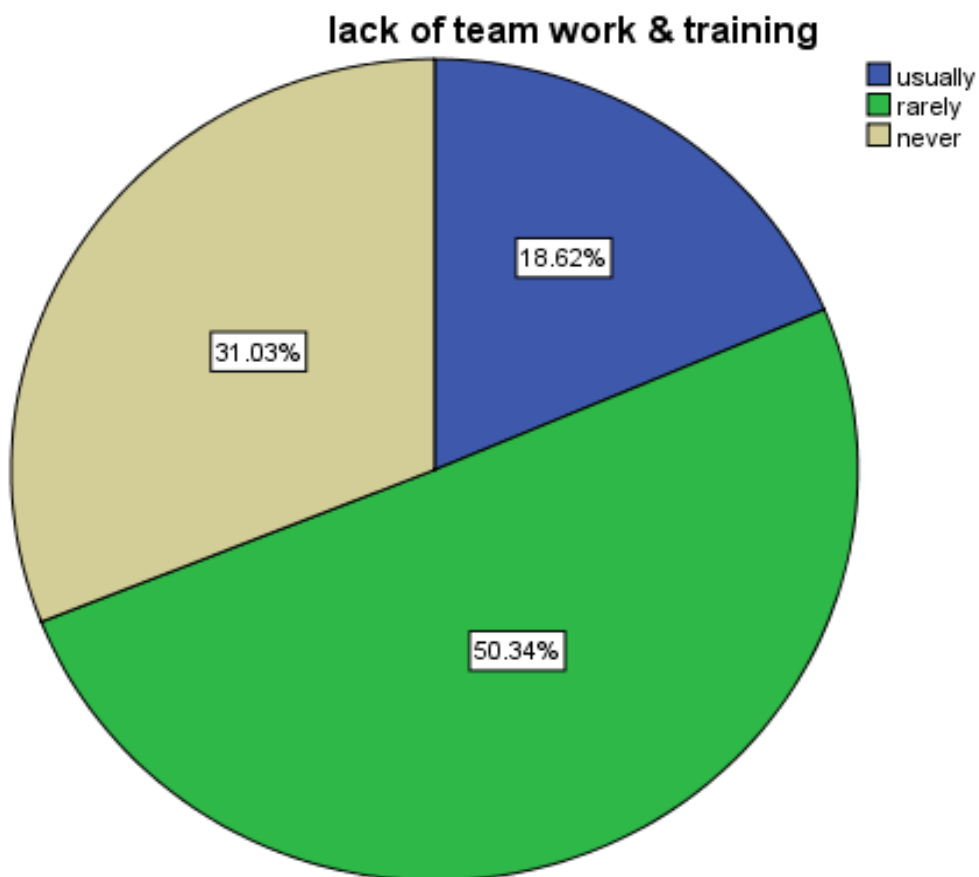


Figure No. 4.3.2

### 4.3.3 Lack of knowledge & experience

	Frequency	Percent
usually	88	60.7
rarely	37	25.5
never	20	13.8
Total	145	100.0

Table No. 4.3.3

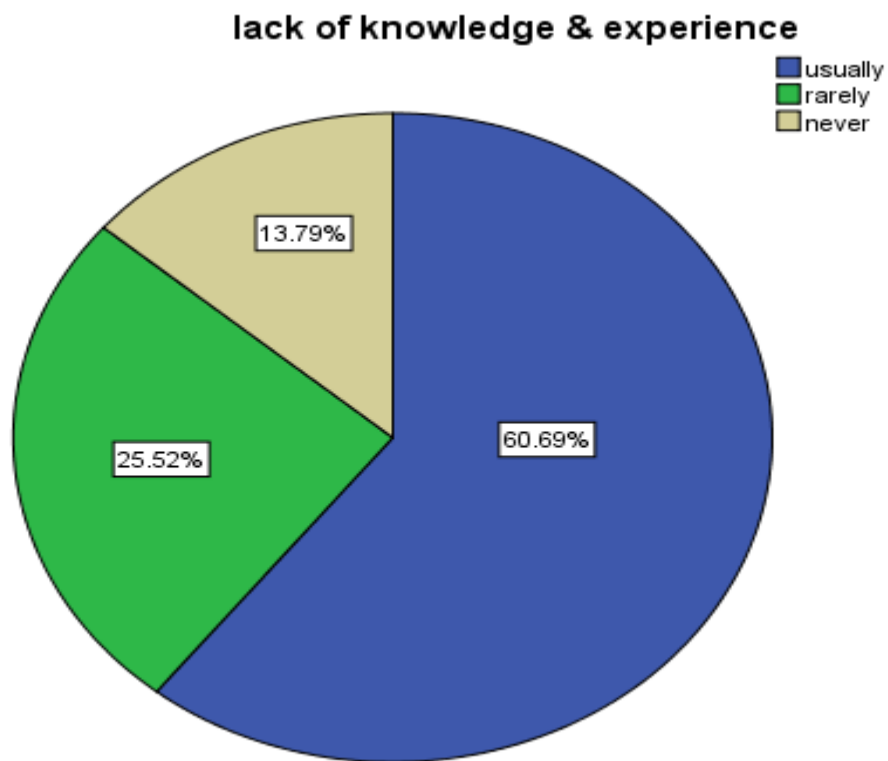


Figure No. 4.3.3

**4.3.4 Unclear work tasks & ambiguity of management**

	Frequency	Percent
usually	17	11.7
rarely	66	45.5
never	62	42.8
Total	145	100.0

Table No. 4.3.4

**unclear work tasks & ambiguity of management**

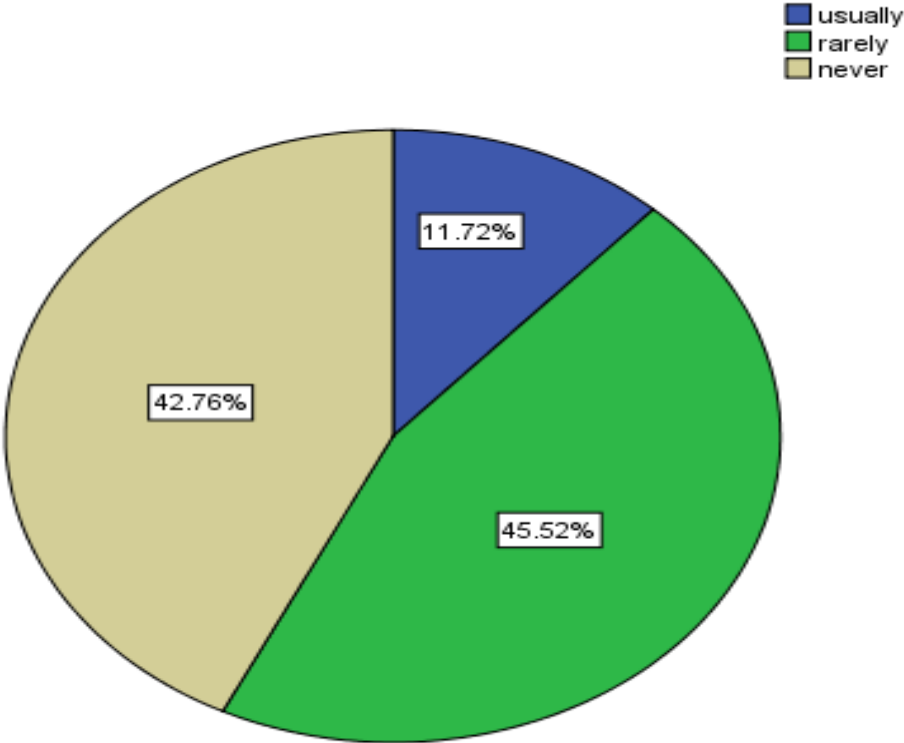


Figure 4.3.4

### 4.3.5 Work overload & conflicts in relations

	Frequency	Percent
usually	21	14.5
rarely	61	42.1
never	63	43.4
Total	145	100.0

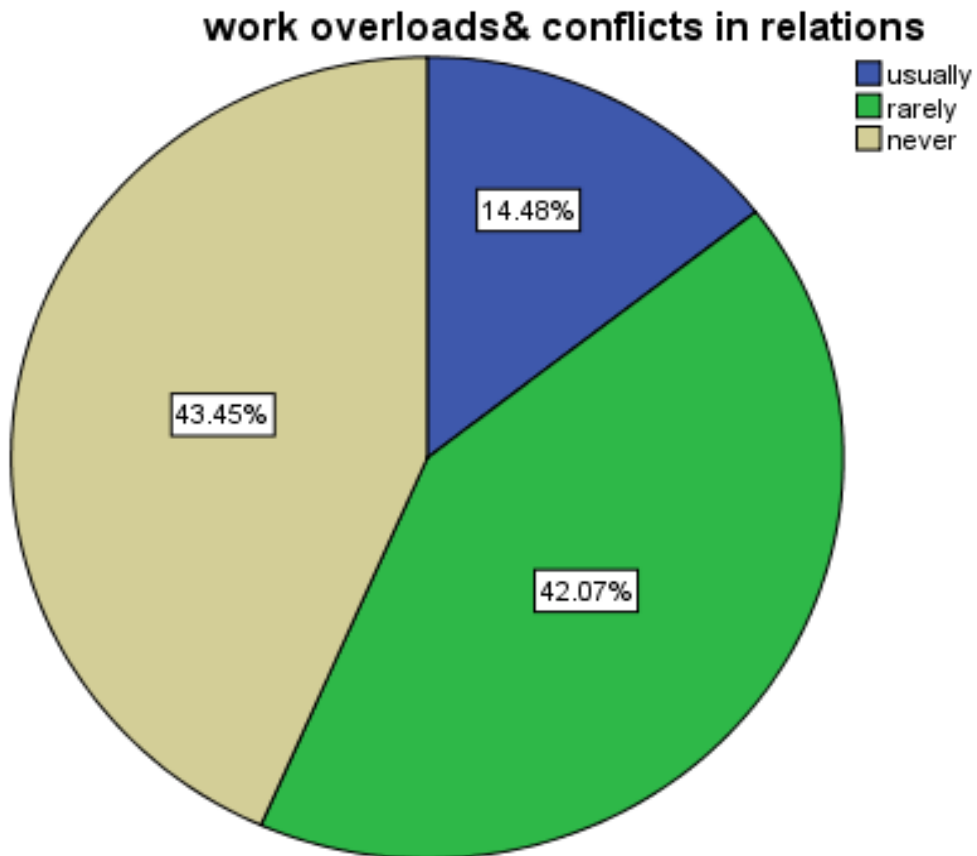


Table No. 4.3.5



### 4.3.6 Emotional exhaustion

	Frequency	Percent
usually	58	40.0
rarely	72	49.7
never	15	10.3
Total	145	100.0

Table No. 4.3.6

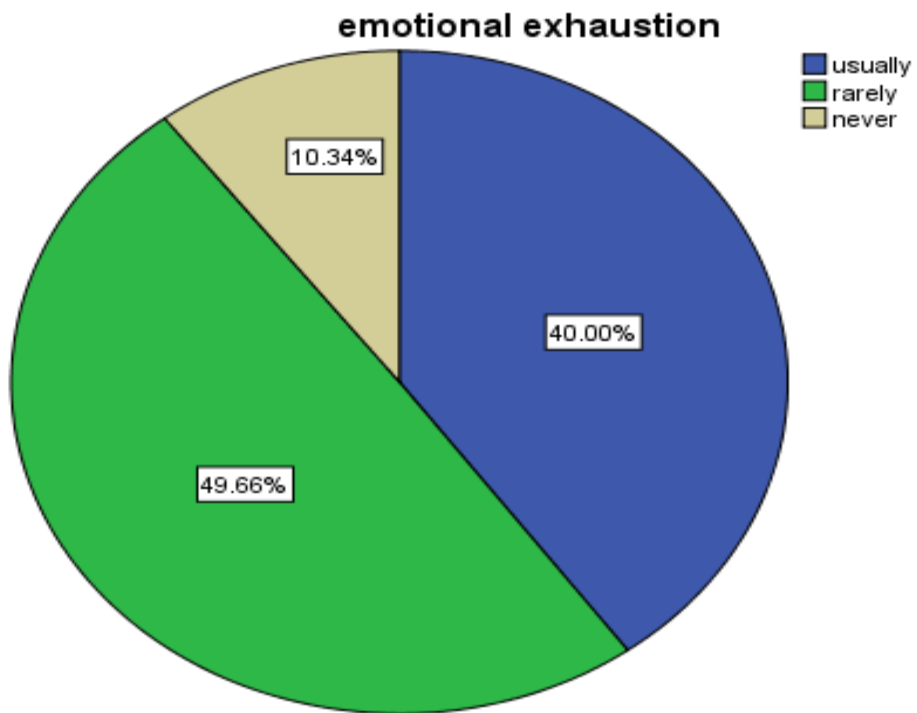


Table No. 4.3.6

### 4.3.7 Depersonalization

	Frequency	Percent
usually	39	26.9
rarely	33	22.8
never	73	50.3
Total	145	100.0

Table No. 4.3.7

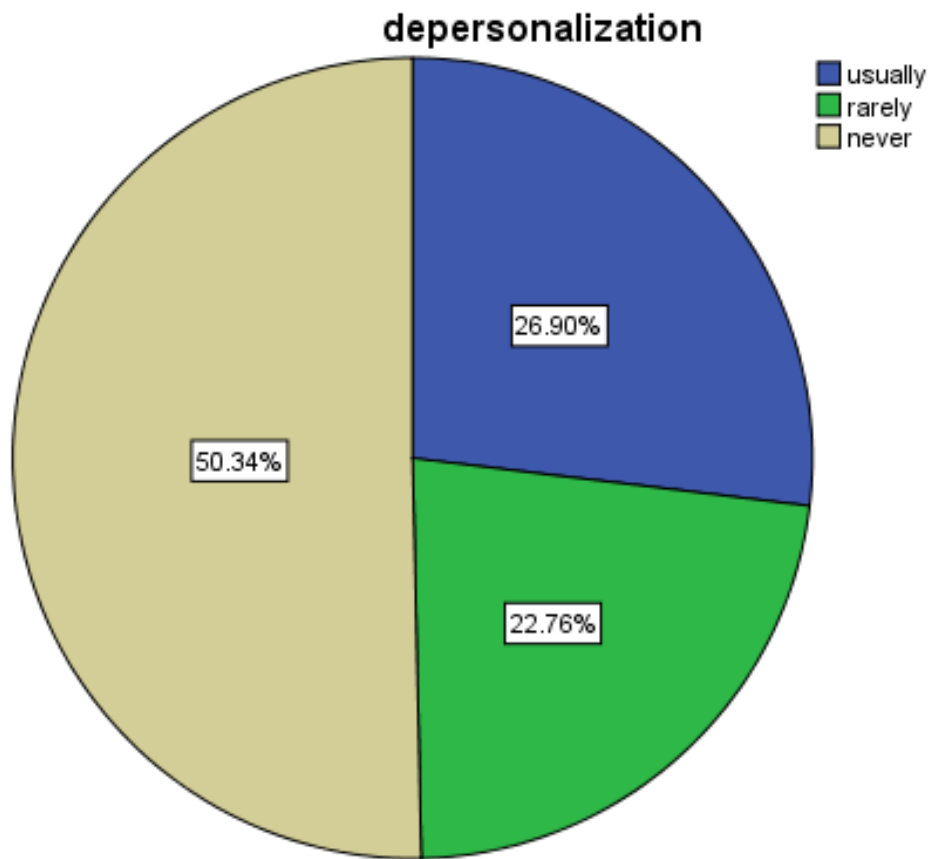


Figure No. 4.3.7

### 4.3.8 Professional accomplishment

	Frequency	Percent
usually	68	46.9
rarely	63	43.4
never	14	9.7
Total	145	100.0

Table No. 4.3.8

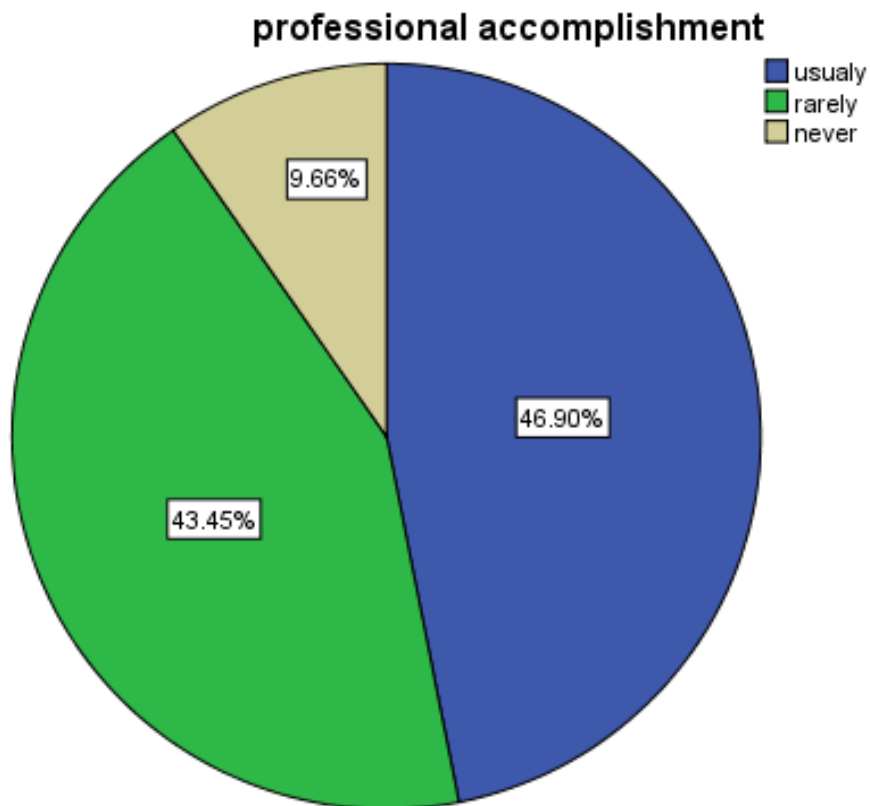


Figure No. 4.3.8

### 4.3.9 Tiredness

	Frequency	Percent
usually	50	34.5
rarely	70	48.3
never	25	17.2
Total	145	100.0

Table 4.3.9

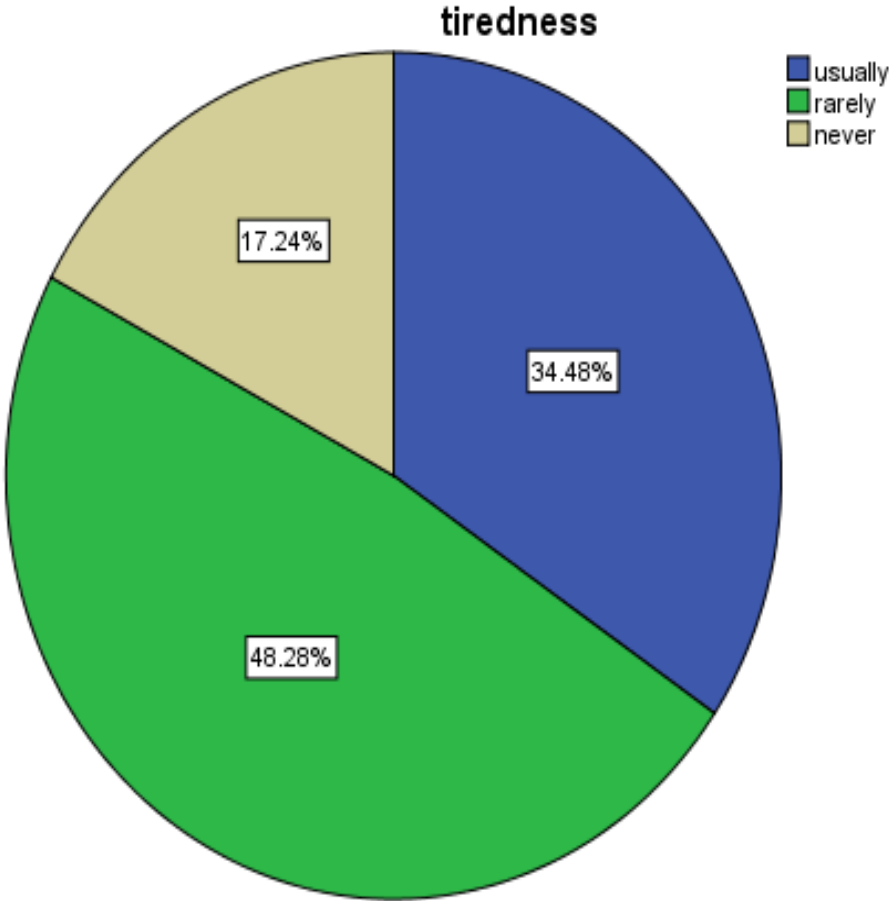


Figure 4.3.9

### 4.3.10 Musculoskeletal pain & headache

	Frequency	Percent
usually	57	39.3
rarely	70	48.3
never	18	12.4
Total	145	100.0

Table 4.3.10

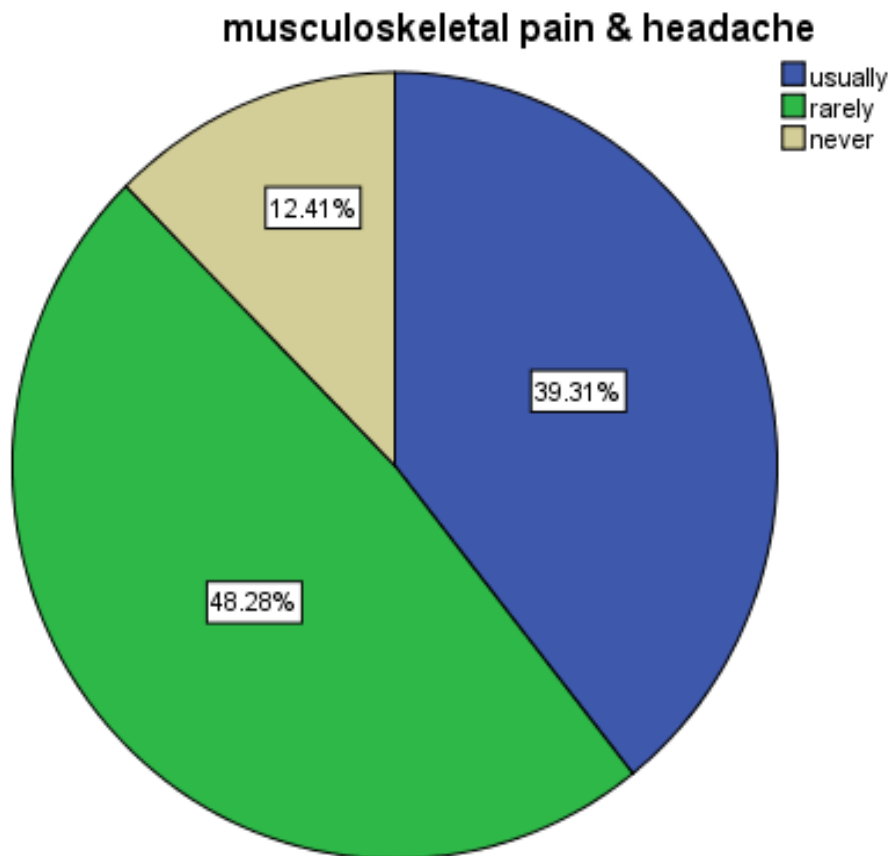


Figure 4.3.10

### 4.3.11 Psychosomatic health problems

	Frequency	Percent
usually	18	12.4
rarely	38	26.2
never	89	61.4
Total	145	100.0

Table No. 4.3.11

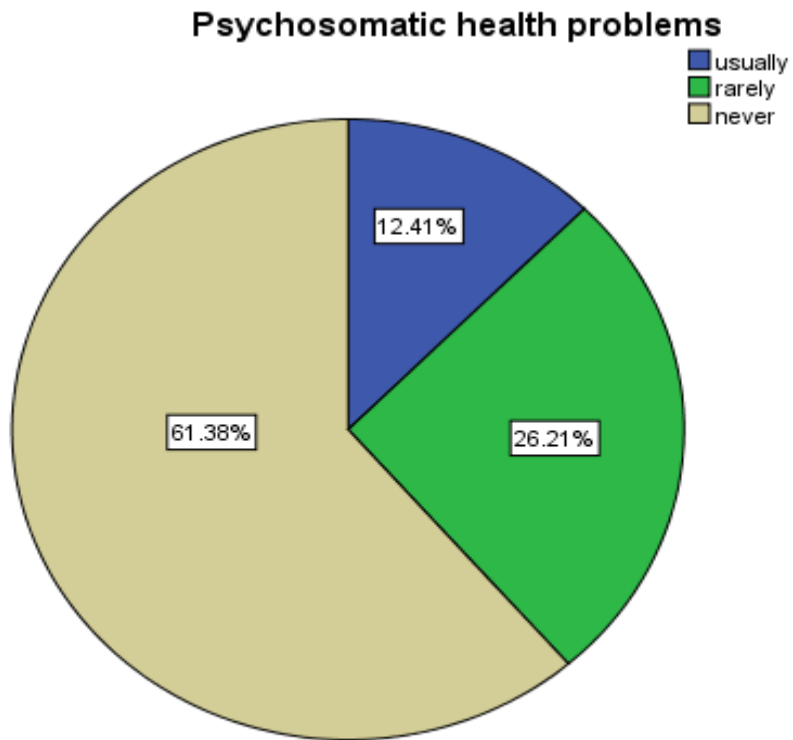


Figure No. 4.3.11

### 4.3.12 stress factors

	Frequency	Percent
usually	18	12.4
rarely	94	64.8
never	33	22.8
Total	145	100.0

Table No. 4.3.12

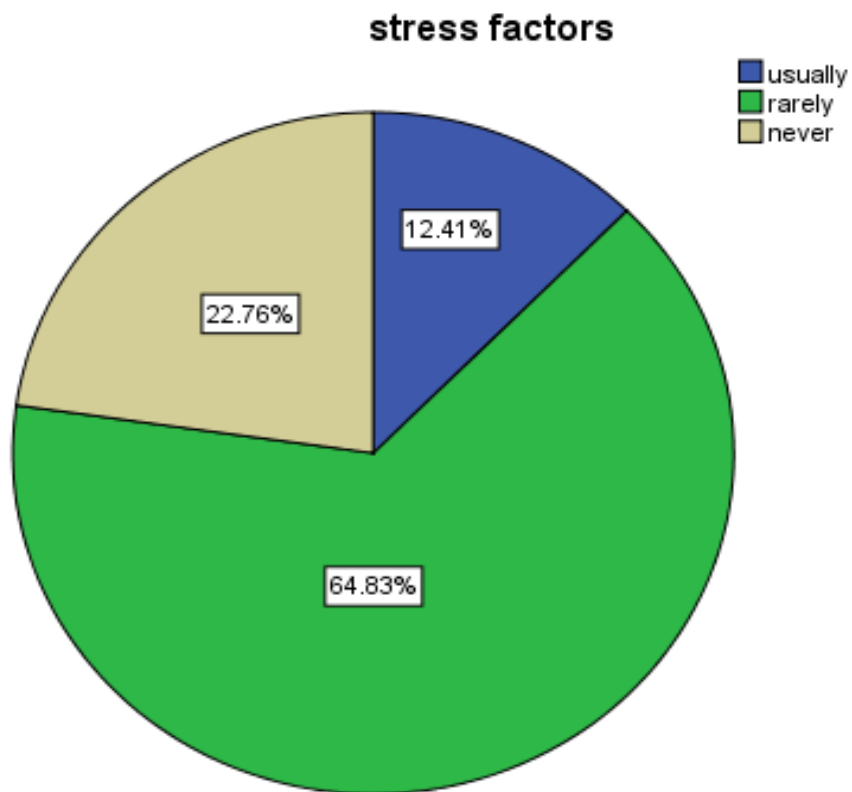


Figure No. 4.3.12

### 4.3.13 Burnout indicators

	Frequency	Percent
usually	43	29.7
rarely	95	65.5
never	7	4.8
Total	145	100.0

Table No. 4.3.13

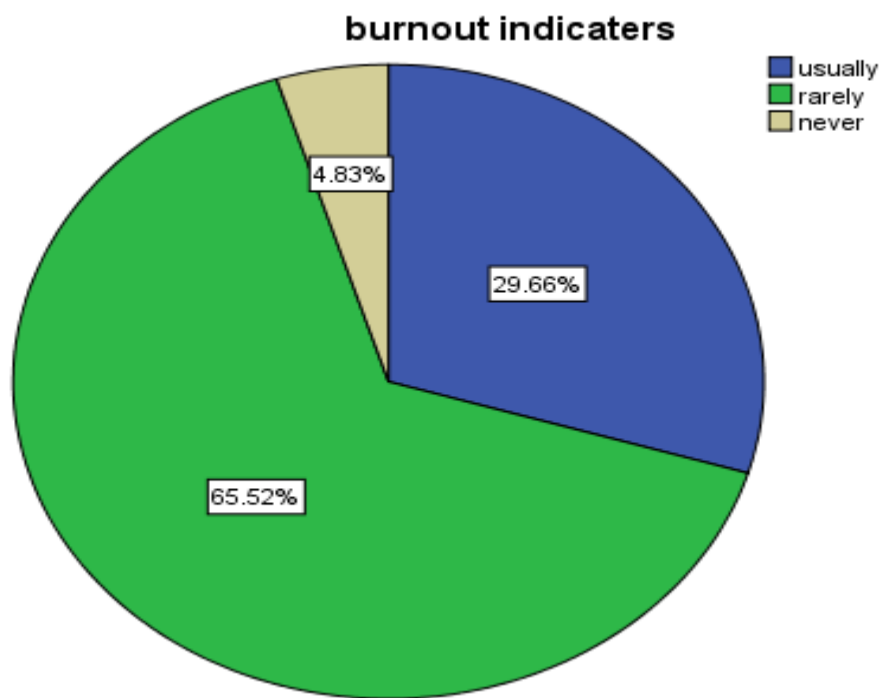


Table No. 4.3.13



### 4.3.14 Health problems

	Frequency	Percent
usually	29	20.0
rarely	81	55.9
never	35	24.1
Total	145	100.0

Table No. 4.3.14

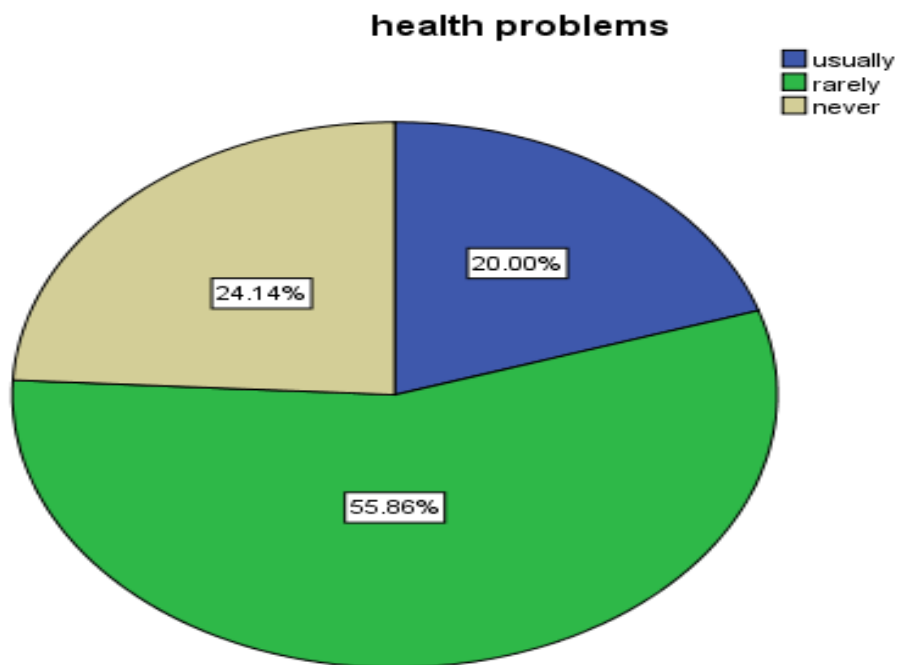


Figure 4.3.14

## 4.4 Stress factors\* Personal information: -

### 4.4.1 type \* stress factors:

**type \* stress factors Cross tabulation**

		stress factors			Total	
		usually	rarely	never		
type	male	Count	1	21	8	30
		% within type	3.3%	70.0%	26.7%	100.0%
type	female	Count	17	73	25	115
		% within type	14.8%	63.5%	21.7%	100.0%
Total		Count	18	94	33	145
		% within type	12.4%	64.8%	22.8%	100.0%

Table No. 4.4.1

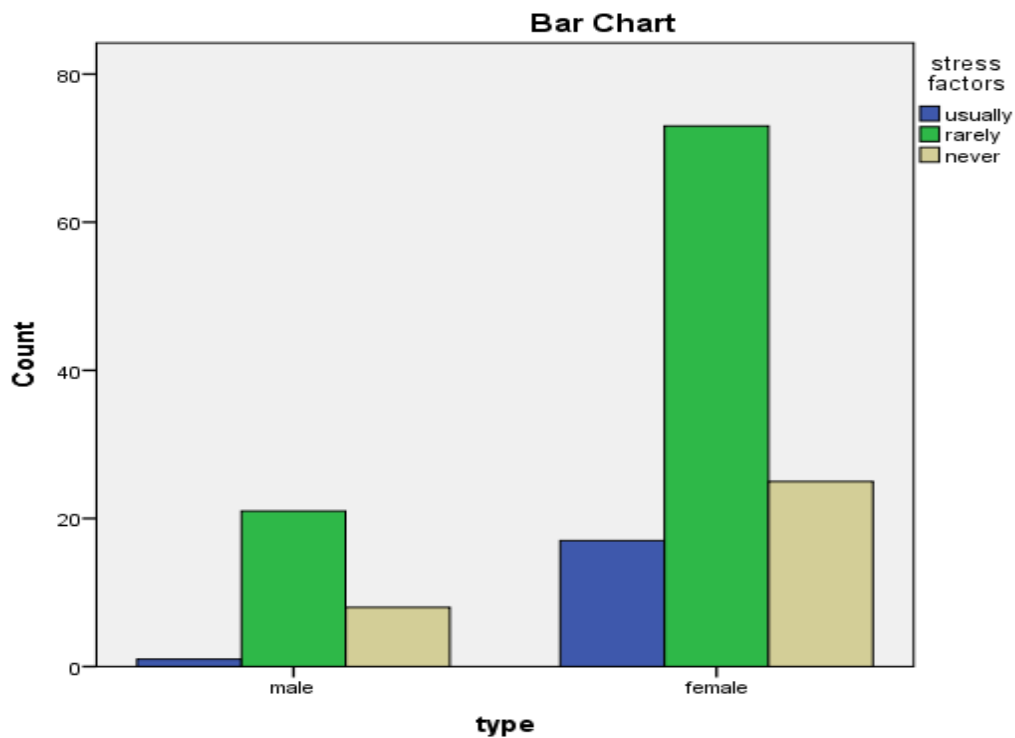


Figure No. 4.4.1

#### 4.4.2 Occupation \* stress factors:

**Occupation \* stress factors Cross tabulation**

			stress factors			Total
			usually	rarely	never	
Occupation	doctor	Count	6	24	11	41
		% within Occupation	14.6%	58.5%	26.8%	100.0%
Occupation	nurse	Count	12	70	22	104
		% within Occupation	11.5%	67.3%	21.2%	100.0%
Total		Count	18	94	33	145
		% within Occupation	12.4%	64.8%	22.8%	100.0%

Table No.4.4.2

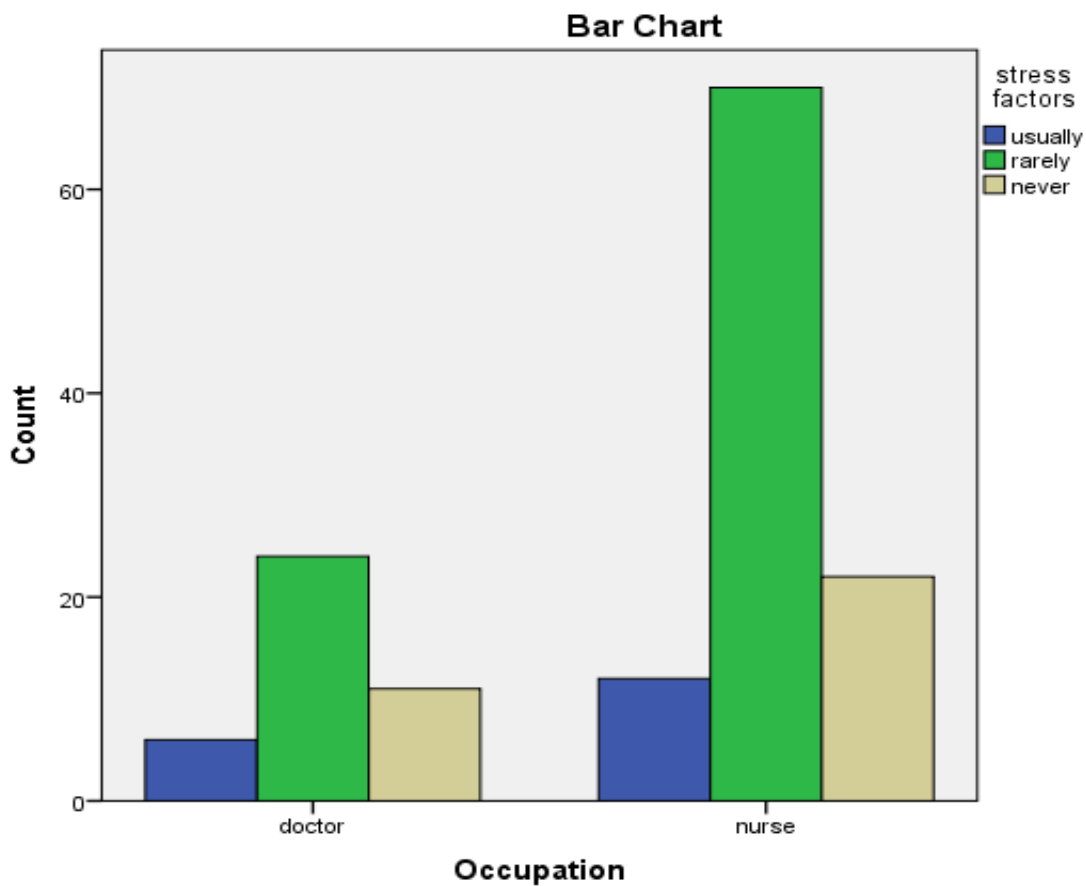


Figure No. 4.4.2

### 4.4.3 Working years \* stress factors:

working years \* stress factors Cross tabulation

			stress factors			Total
			usually	rarely	never	
working years	less than 5 years	Count	13	71	27	111
		% within working years	11.7%	64.0%	24.3%	100.0%
	5-10 years	Count	4	20	6	30
		% within working years	13.3%	66.7%	20.0%	100.0%
	more than 10 years	Count	1	3	0	4
		% within working years	25.0%	75.0%	0.0%	100.0%
Total	Count	18	94	33	145	
	% within working years	12.4%	64.8%	22.8%	100.0%	

Table No. 4.4.3

Bar Chart

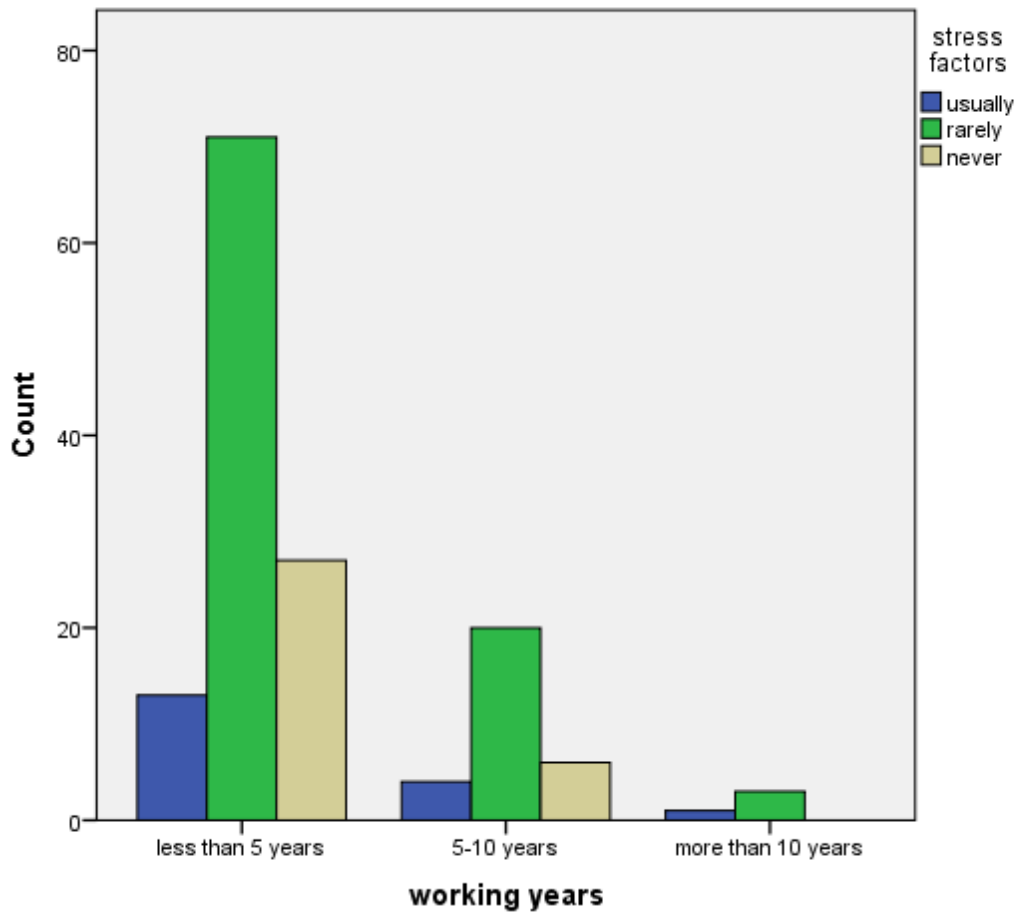


Figure No. 4.4.3

#### 4.4.4 Type of occupation \* stress factors:

**type of occupation \* stress factors Cross tabulation**

			stress factors			Total
			usually	rarely	never	
type of occupation	military	Count	5	20	4	29
		% within type of occupation	17.2%	69.0%	13.8%	100.0%
	not military	Count	13	74	29	116
		% within type of occupation	11.2%	63.8%	25.0%	100.0%
Total	Count	18	94	33	145	
	% within type of occupation	12.4%	64.8%	22.8%	100.0%	

Table No. 4.4.4

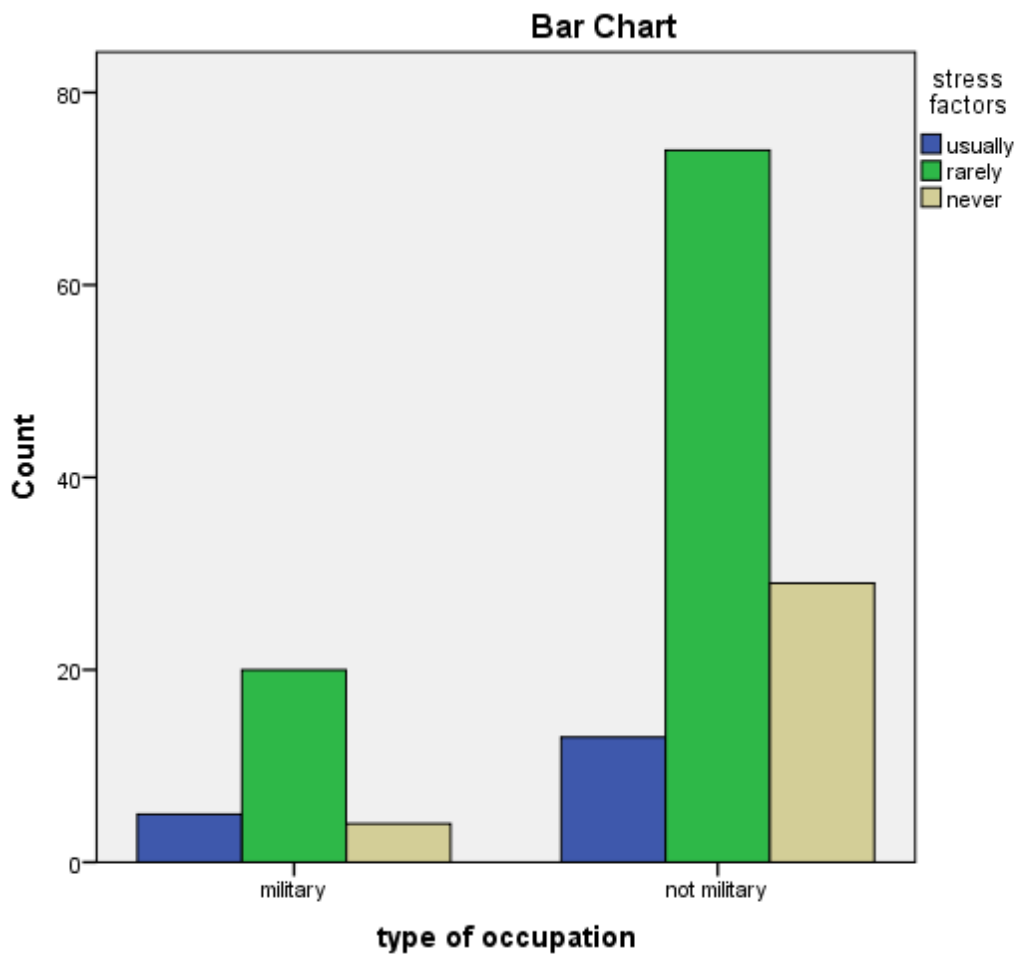


Figure No. 4.4.4

#### 4.4.5 Duty \* stress factors:

**duty \* stress factors Cross tabulation**

			stress factors			Total
			usually	rarely	never	
duty	first	Count	14	67	25	106
		% within duty	13.2%	63.2%	23.6%	100.0%
	second	Count	4	27	8	39
		% within duty	10.3%	69.2%	20.5%	100.0%
Total	Count	18	94	33	145	
	% within duty	12.4%	64.8%	22.8%	100.0%	

Table No. 4.4.5

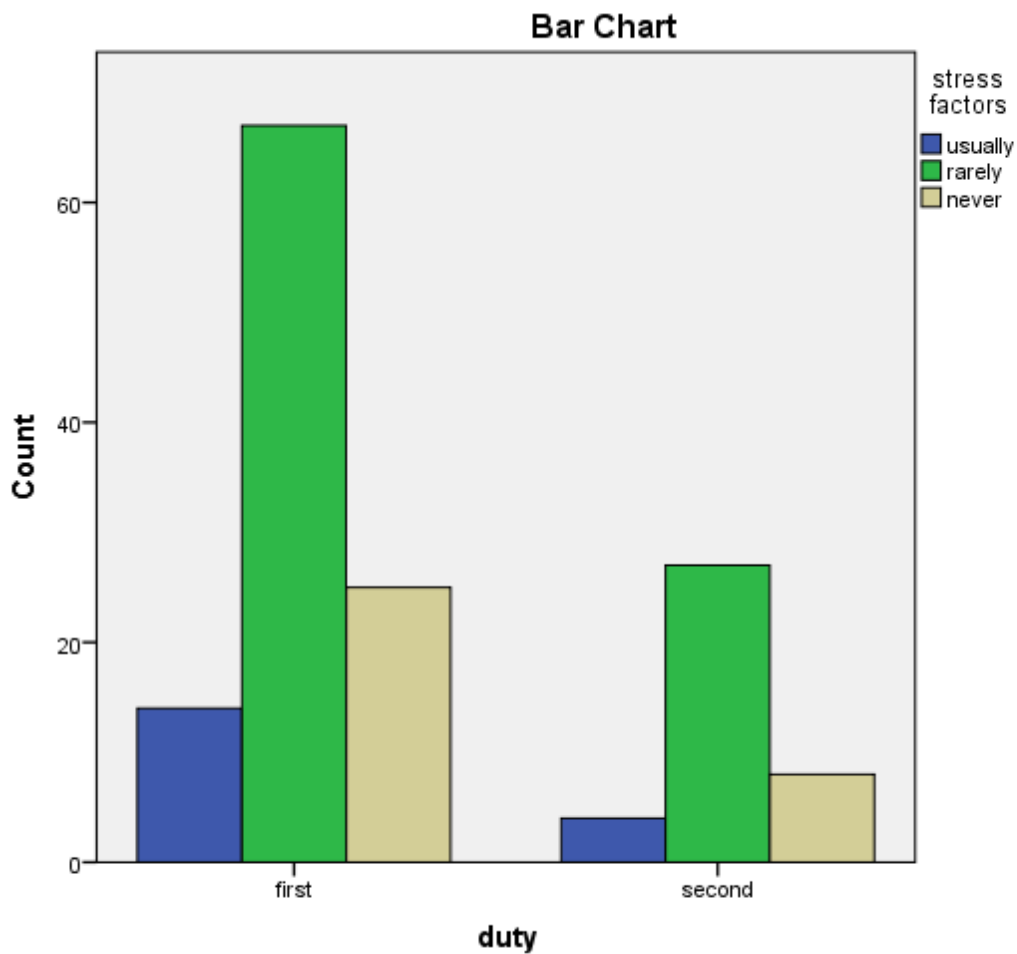


Figure No. 4.4.5

## 4.5 Burn out indicators \* Personal information: -

### 4.5.1 Type \* burnout indicators:

**type \* burnout indicators Cross tabulation**

		burnout indicators			Total	
		usually	rarely	never		
type	male	Count	9	19	2	30
		% within type	30.0%	63.3%	6.7%	100.0%
	female	Count	34	76	5	115
		% within type	29.6%	66.1%	4.3%	100.0%
Total		Count	43	95	7	145
		% within type	29.7%	65.5%	4.8%	100.0%

Table No. 4.5.1

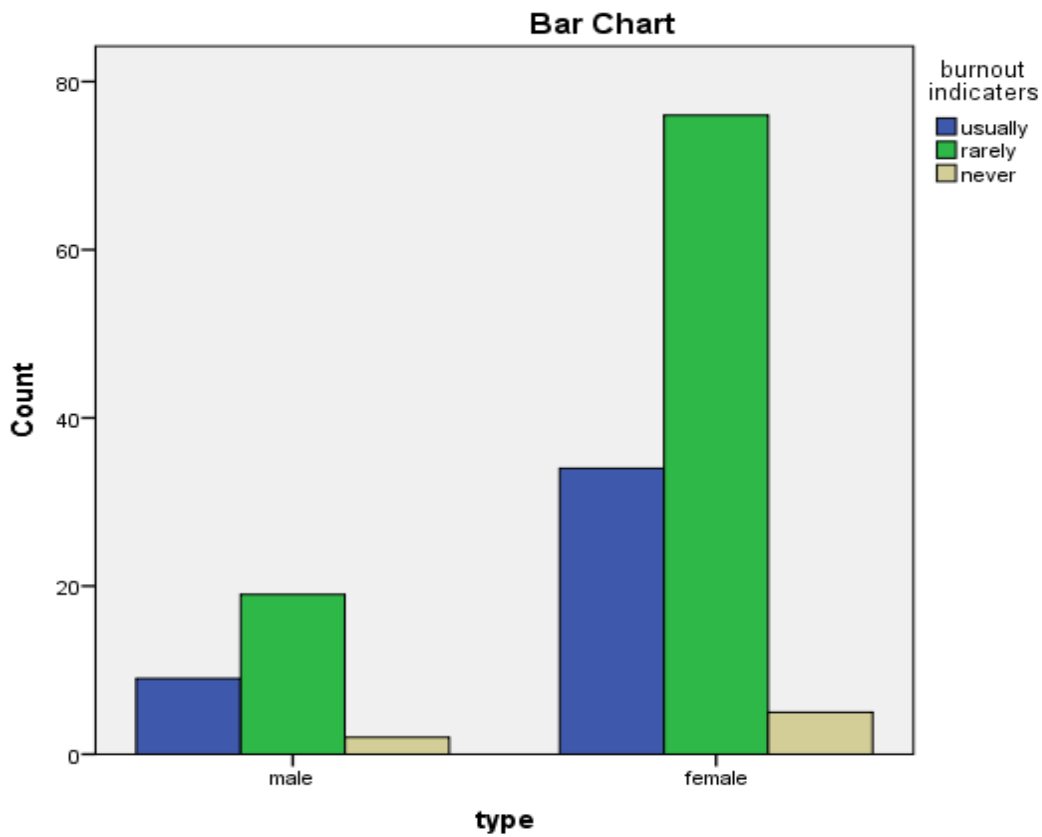


Figure No. 4.5.1

### 4.5.2 Occupation \* burnout indicators:

**Occupation \* burnout indicators Cross tabulation**

			burnout indicators			Total
			usually	rarely	never	
Occupation	doctor	Count	13	27	1	41
		% within Occupation	31.7%	65.9%	2.4%	100.0%
	nurse	Count	30	68	6	104
		% within Occupation	28.8%	65.4%	5.8%	100.0%
Total		Count	43	95	7	145
		% within Occupation	29.7%	65.5%	4.8%	100.0%

Table No. 4.5.2

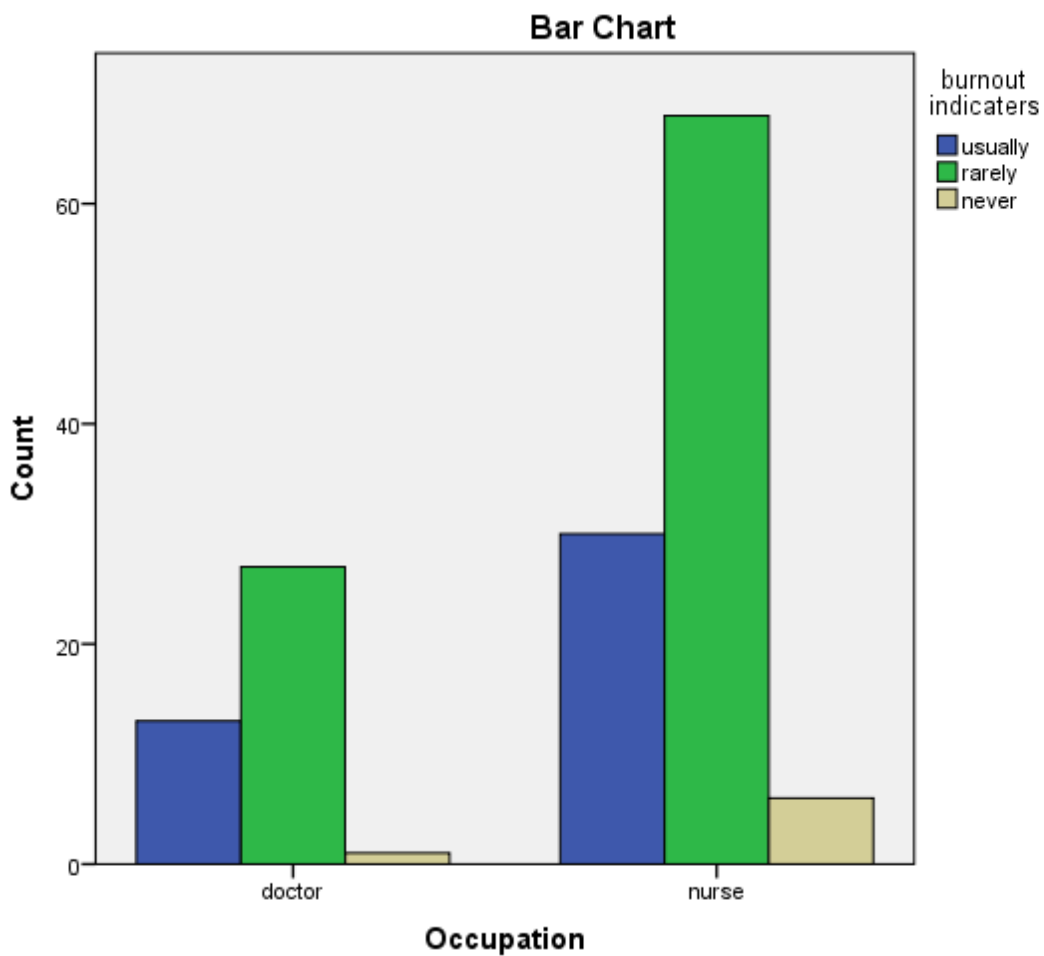


Figure 4.5.2



### 4.5.3 Working years \* burnout indicators:

**working years \* burnout indicators Cross tabulation**

			burnout indicators			Total
			usually	rarely	never	
working years	less than 5 years	Count	30	75	6	111
		% within working years	27.0%	67.6%	5.4%	100.0%
	5-10 years	Count	11	18	1	30
		% within working years	36.7%	60.0%	3.3%	100.0%
	more than 10 years	Count	2	2	0	4
		% within working years	50.0%	50.0%	0.0%	100.0%
Total	Count	43	95	7	145	
	% within working years	29.7%	65.5%	4.8%	100.0%	

Table No. 4.5.3

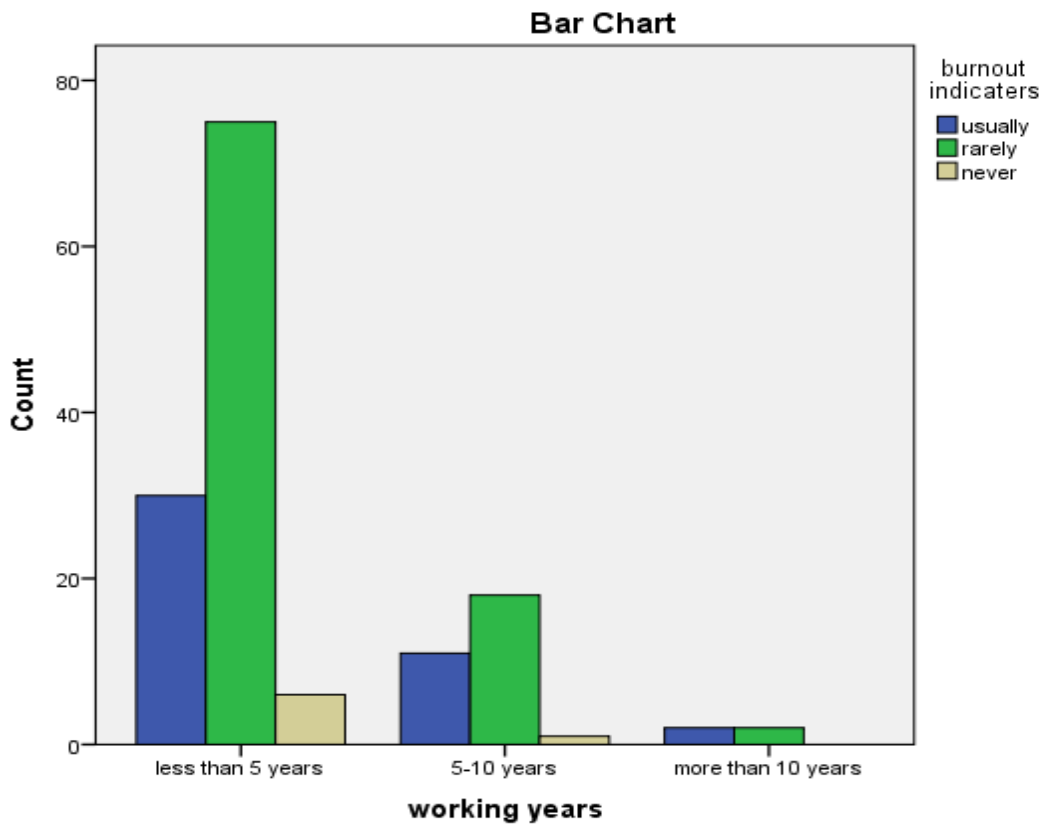


Figure No. 4.5.3

#### 4.5.4 Type of occupation\* burnout indicators:

**type of occupation \* burnout indicators cross tabulation**

			burnout indicators			Total
			usually	rarely	never	
type of occupation	military	Count	13	15	1	29
		% within type of occupation	44.8%	51.7%	3.4%	100.0%
	not military	Count	30	80	6	116
		% within type of occupation	25.9%	69.0%	5.2%	100.0%
Total	Count	43	95	7	145	
	% within type of occupation	29.7%	65.5%	4.8%	100.0%	

Table No. 4.5.4

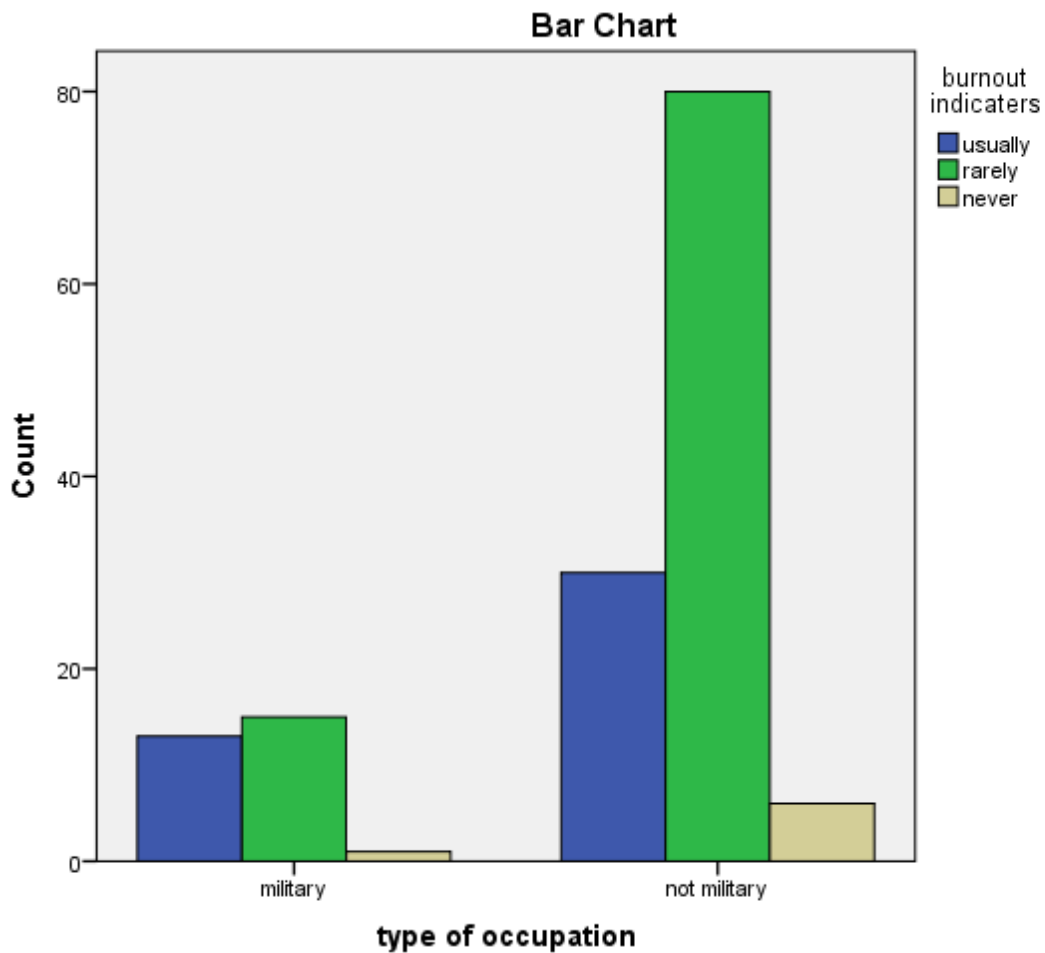


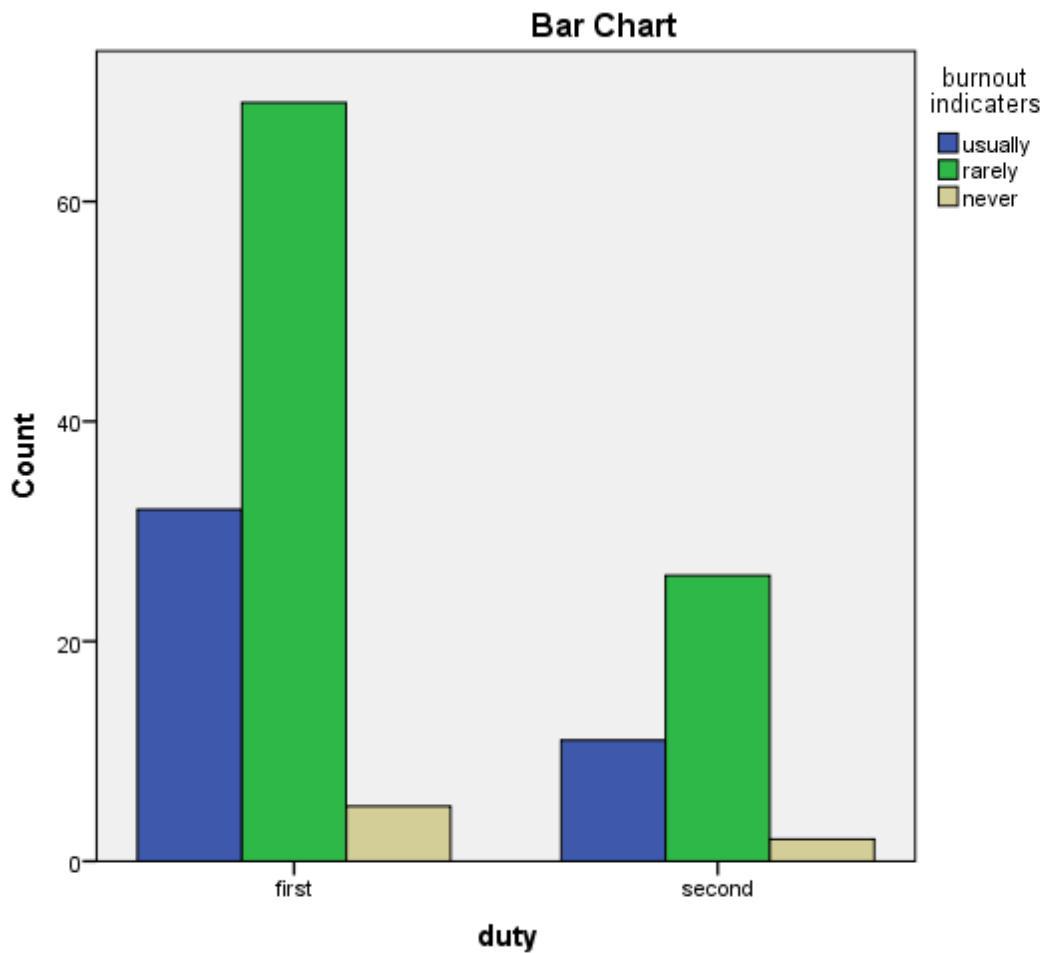
Figure No. 4.5.4

### 4.5.5 Duty \* burnout indicators:

**duty \* burnout indicators Cross tabulation**

			burnout indicators			Total
			usually	rarely	never	
duty	first	Count	32	69	5	106
		% within duty	30.2%	65.1%	4.7%	100.0%
	second	Count	11	26	2	39
		% within duty	28.2%	66.7%	5.1%	100.0%
Total	Count	43	95	7	145	
	% within duty	29.7%	65.5%	4.8%	100.0%	

Table No. 4.5.5



## 4.6 Health problems \* Personal information: -

### 4.6.1 Type \* health problems:

**type \* health problems cross tabulation**

		health problems			Total	
		usually	rarely	never		
type	male	Count	4	15	11	30
		% within type	13.3%	50.0%	36.7%	100.0%
	female	Count	25	66	24	115
		% within type	21.7%	57.4%	20.9%	100.0%
Total		Count	29	81	35	145
		% within type	20.0%	55.9%	24.1%	100.0%

Table No. 4.6.1

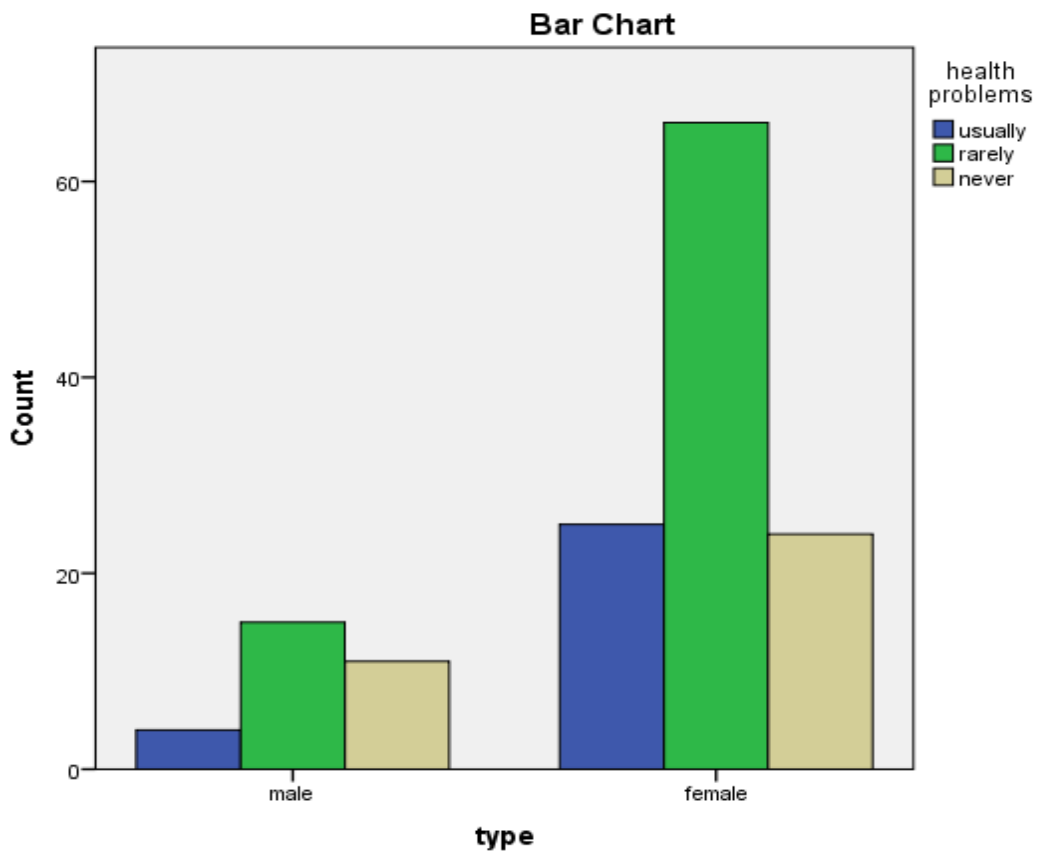


Figure No. 4.6.1

#### 4.6.2 Occupation\* health problems:

**Occupation \* health problems cross tabulation**

		health problems			Total	
		usually	rarely	never		
Occupation	doctor	Count	12	22	7	41
		% within Occupation	29.3%	53.7%	17.1%	100.0%
	nurse	Count	17	59	28	104
		% within Occupation	16.3%	56.7%	26.9%	100.0%
Total		Count	29	81	35	145
		% within Occupation	20.0%	55.9%	24.1%	100.0%

Table No. 4.6.2

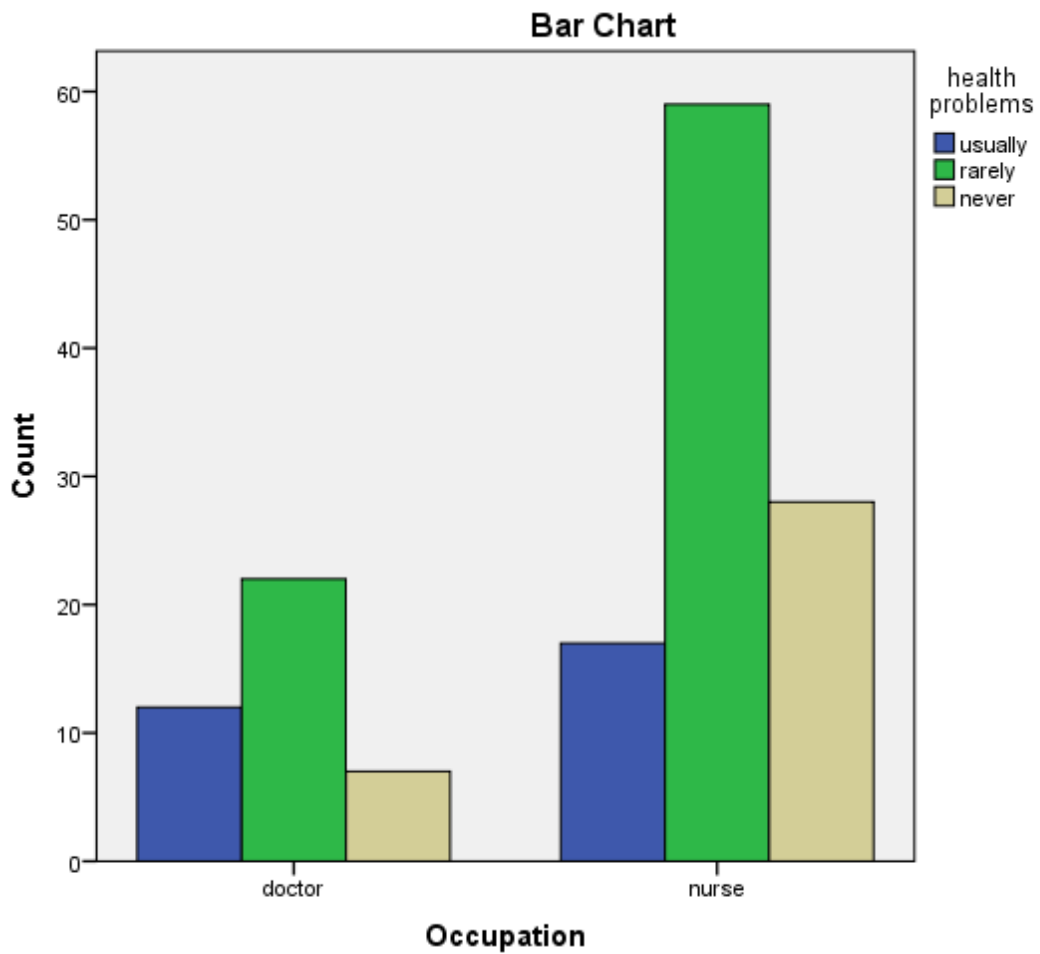


Figure No. 4.6.2

### 4.6.3 Working years \* health problems:

working years \* health problems cross tabulation

			health problems			Total
			usually	rarely	never	
working years	less than 5 years	Count	24	64	23	111
		% within working years	21.6%	57.7%	20.7%	100.0%
	5-10 years	Count	4	15	11	30
		% within working years	13.3%	50.0%	36.7%	100.0%
	more than 10 years	Count	1	2	1	4
		% within working years	25.0%	50.0%	25.0%	100.0%
Total	Count	29	81	35	145	
	% within working years	20.0%	55.9%	24.1%	100.0%	

Table No. 4.6.3

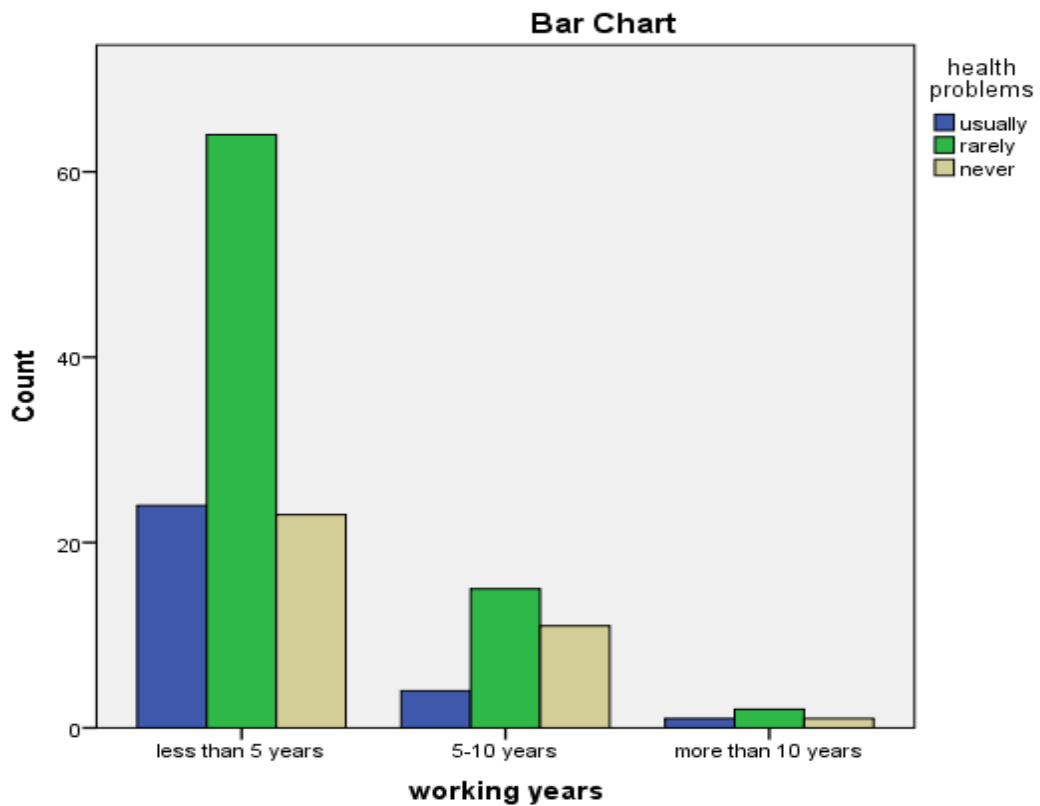


Figure No. 4.6.3

#### 4.6.4 Type of occupation \* health problems:

**type of occupation \* health problems cross tabulation**

			health problems			Total
			usually	rarely	never	
type of occupation	military	Count	6	17	6	29
		% within type of occupation	20.7%	58.6%	20.7%	100.0%
	not military	Count	23	64	29	116
		% within type of occupation	19.8%	55.2%	25.0%	100.0%
Total	Count	29	81	35	145	
	% within type of occupation	20.0%	55.9%	24.1%	100.0%	

Table No. 4.6.4

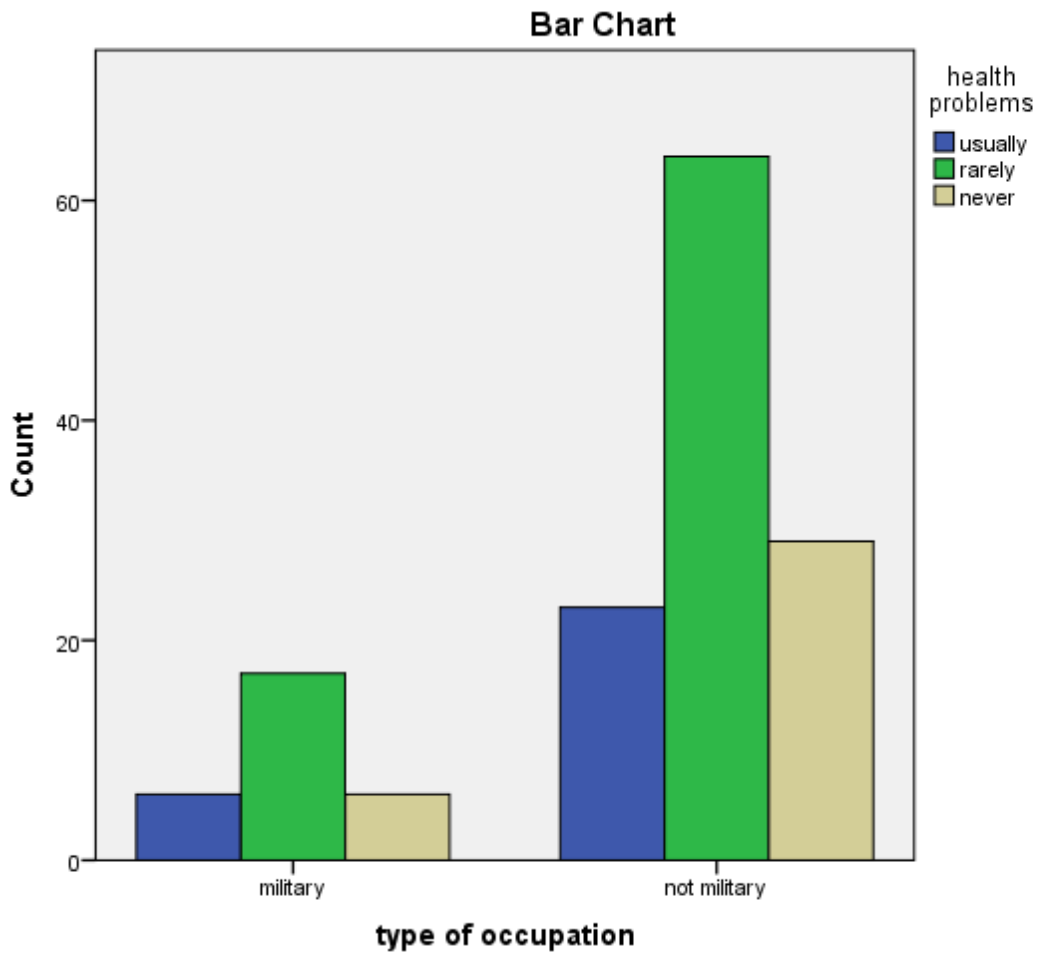


Figure No. 4.6.4

### 4.6.5 Duty \* health problems:

**duty \* health problems cross tabulation**

			health problems			Total
			usually	rarely	never	
duty	first	Count	25	55	26	106
		% within duty	23.6%	51.9%	24.5%	100.0%
	second	Count	4	26	9	39
		% within duty	10.3%	66.7%	23.1%	100.0%
Total	Count	29	81	35	145	
	% within duty	20.0%	55.9%	24.1%	100.0%	

Table No. 4.6.5

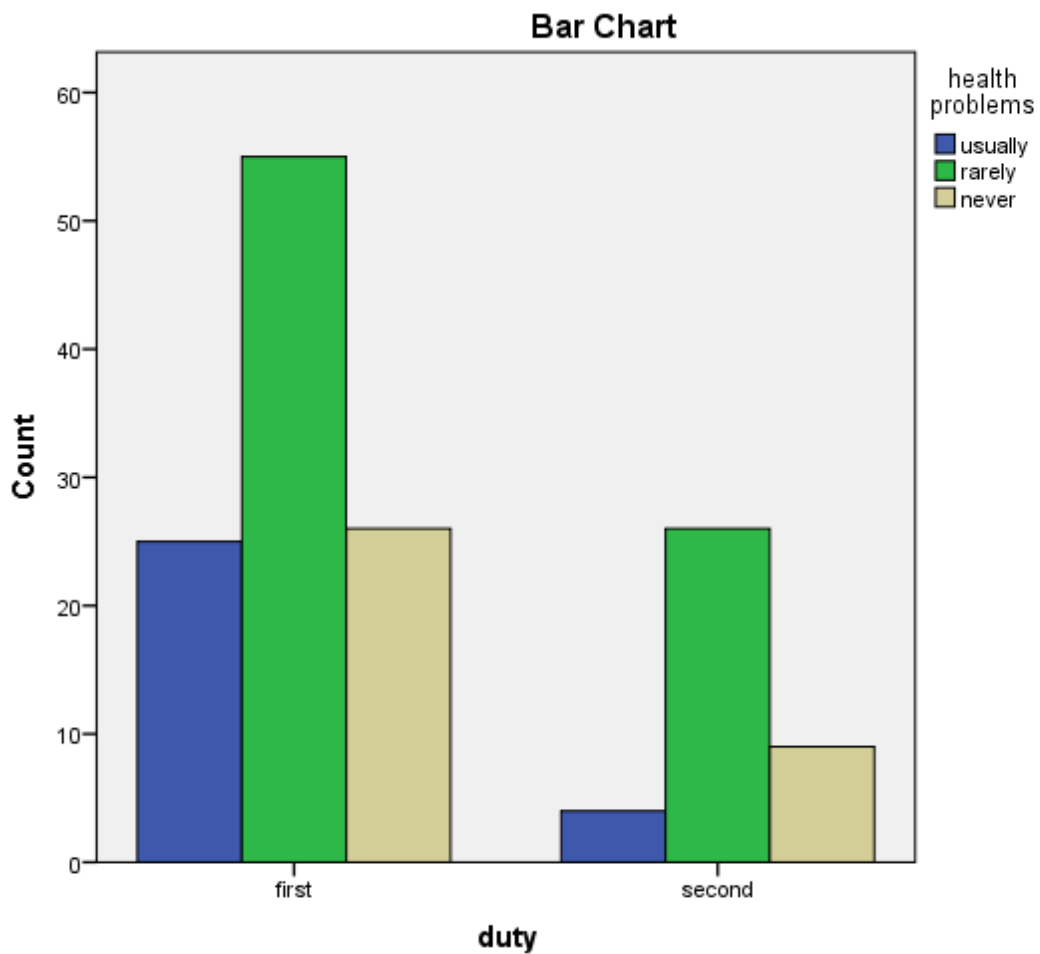


Figure No. 4.6.5



## 4.7 Test of hypothesis:-

### 4.7.1 The first hypothesis:

There is relationship between stress factors & burnout indicators among doctors & nurses in Accident & Emergency Hospital-Khartoum state.

		stress factors	burnout indicators
stress factors	Pearson Correlation	1	.305**
	Sig. (2-tailed)		.000
	N	145	145
burnout indicators	Pearson Correlation	.305**	1
	Sig. (2-tailed)	.000	
	N	145	145

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Table No. 4.7.1.a

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.305 <sup>a</sup>	.093	.086	.510

a. Predictors: (Constant), stress factors

Table No. 4.7.1.b

#### 4.7.2 The second hypothesis:

There is relationship between stress factors & health problems among doctors & nurses in Accident & Emergency Hospital -Khartoum state.

		stress factors	health problems
stress factors	Pearson Correlation	1	.274**
	Sig. (2-tailed)		.001
	N	145	145
health problems	Pearson Correlation	.274**	1
	Sig. (2-tailed)	.001	
	N	145	145

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Table No. 4.7.2.a

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.274 <sup>a</sup>	.075	.069	.642

a. Predictors: (Constant), stress factors

Table No. 4.7.2.b

### 4.7.3 The third hypothesis:

There is relationship between burnout indicators & health problems among doctors & nurses in Accident & Emergency Hospital -Khartoum state.

		burnout indicators	health problems
burnout indicators	Pearson Correlation	1	.283**
	Sig. (2-tailed)		.001
	N	145	145
health problems	Pearson Correlation	.283**	1
	Sig. (2-tailed)	.001	
	N	145	145

\*\* . Correlation is significant at the 0.01 level (2-tailed).

Table 4.7.3.a

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.283 <sup>a</sup>	.080	.074	.640

a. Predictors: (Constant), burnout indicators

Table No. 4.7.3.b

### 4.8 Reliability test:

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.883	.882	49

Table No. 4.8

Cronbach's Alpha is 0.883, which indicates a high level of internal consistency

# **CHAPTER FIVE**

## **DISCUSSION, CONCLUSION & RECOMMENDATION**

# Chapter five

## Discussion, conclusion & recommendation

### 5.1 Discussion:

The results of this study demonstrate that the most significant causes of work stress were lack of career, recognition & resources (b = 0.61). Other factors that affected the stress level of the employees were, unclear work tasks & ambiguity of management (b = 0.56), lack of team work & training (b = 0.49), work overload & conflicts in relation (b = 0.45), and lack of experience & knowledge had the least impact on the development of work stress (b = 0.25). And the main indicator of burnout was emotional exhaustion (b = 0.45), the second indicator was professional accomplishment (b = 0.36) and the third indicator was depersonalization (b = 0.24). The first & main health problem was tiredness and mental strain (b = 0.68), the second health problem was psychosomatic health problems (b = 0.65) and the third health problem was musculoskeletal pain and headache (b = 0.63).

According to regression analysis results which were used to test the hypotheses in the previous chapter, the researcher found that:

Hypothesis	Result
There is relationship between stress factors & burnout indicators among doctors & nurses in Accident & Emergency Hospital-Khartoum state.	True
There is relationship between stress factors & health problems among doctors & nurses in Accident & Emergency Hospital-Khartoum state.	True
There is relationship between burnout indicators & health problems among doctors & nurses in Accident & Emergency Hospital-Khartoum state.	True

**Table No. 5.1**

And the significant value is  $< 0.05$  for all hypotheses, that mean reject the null hypotheses & accept the researcher hypotheses

## **5.2 Conclusion:**

From the study results we can conclude: -

- 1-There is relationship between work stress factors & burn out indicator among doctors & nurses in Accident and ER hospital.
- 2-There is relationship between work stress factors & health problems among doctors & nurses in Accident and ER hospital.
- 3-There is relationship between burnout indicators & health problems among doctors & nurses in Accident and ER hospital.

## **5.3 Recommendations:**

- 1- Good planning of resources is necessary in every day work& especially during critical times.
- 2-Time should also be reserved for listening to the staff & attempting to create opportunities for the employees
- 3-Increase encouragement & support to staff in the development of their interpersonal, training and job skills
- 4-Establish appropriate acknowledgement & appreciation of staff efforts in a fair & timely manner, this include appropriate and regular financial compensation as well as employee or team celebrations, recognition.

## 5.4 References: -

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## 5.5 Appendix: -

### 5.5.1 Questionnaire (Arabic)

بسم الله الرحمن الرحيم

ماجستير إدارة الجودة و الإمتياز

عمادة الجودة و التطوير

جامعة السودان للعلوم و التكنولوجيا

#### مقدمة:-

صمم هذا الإستقصاء لدراسة العلاقة بين التوتر، فرط التوتر والمشاكل الصحية للعاملين في مستشفى الطوارئ والإصابات – السلاح الطبي- امدرمان . إنني أقدرلك استقبالي وأشكرك لقبولك المشاركة في هذه الدراسة التي نتوقع أن تنبني على نتائجها خطوات لتطوير نظام الجودة في مستشفى الطوارئ والإصابات. و نظرا" لانك انت الذي تستطيع إعطاءنا صورة صحيحة عن تجربتك في مكان عملك , لذا الرجاء ان تجيب عن الاسئلة بأمانة و صراحة . أشكرك كثيرا" علي وقتك و تعاونك و أقدر بعمق المساعدة التي قدمتها انت و المستشفى التي تعمل بها لإنجاز هذا البحث .

#### i. البيانات الشخصية:-

يرجي وضع علامة ✓ حول البيانات التي تلائمك في المتغيرات (أ – هـ) ادناه:

أ- النوع:  /1 ذكر  /2 أنثي

ب - المسي الوظيفي:  /1 طبيب  /2 تقني تريض

ج\_ عدد سنوات العمل بالمستشفى:  /1 اقل من 5 سنوات  /2 من 5-10 سنوات  /3 أكثر من 10 سنوات

د- نوع التوظيف:  /1 برتبة عسكرية  /2 بدون رتبة عسكرية

هـ- وردية العمل الحالية:  /1 الاولي  /2 الثانية

▪ ضع علامة ✓ في المكان المخصص تحت الاجابة المناسبة

▪ سوف تكون اسئلة الاستقصاء في عدة محاور و هي:-

1- عوامل التوتر Stress factors

2- مؤشرات فرط/حدة التوتر Burnout indicators

3- الشكاوي الصحية Health complaints

### 1/المحور الاول:العوامل التي تؤدي الى التوتر في العمل

ابدا"	احيانا"	عادة	العبرة
<b>العامل الاول:فقدان المهنة،التقدير،الموارد</b>			
			1-عدم انتباه المشرف و استماعه لمشاكل زملاء
			2-نوعية العمل الذي اقوم به لا يتوافق مع طموحاتي
			3-عدم التقدم في الوظيفة و الترقى للدرجات الاعلي
			4-لا يوجد تقدير إيجابي كافي لما اقوم به من عمل
			5-نقص الموارد المعينة في العمل
			6- الملل من الروتين اليومي في العمل
<b>العامل الثاني: نقص/عدم وجود العمل الجماعي و التدريب</b>			
			7-من الصعب ان احصل علي التغذية الراجعة/المعلومات من زملاء
			8-قلة او عدم وجود العمل الجماعي
			9-نقص/فقدان الدقة المطلوبة في خدمات التدريب
			10-يتم التحكم و إدارة العمل بواسطة آخرين
<b>العامل الثالث:قلة المعرفة و الخبرة</b>			
			11-متطلبات العمل تحتاج لزيادة المعرفة
			21-الوقوع في الأخطاء يكون بسبب قلة الخبرة
<b>العامل الرابع:مهام العمل والتخطيط الإداري غير واضحة المعالم</b>			
			13-مهام العمل غير واضحة
			14-الإحساس بالحيرة و التردد عند مقابلة المشرف
			15-الأخطاء ناتجة عن نقص/سوء التوجيه و الإرشاد
<b>العامل الخامس:عبء العمل الزائد والنزاعات في العلاقات</b>			
			16-المسؤوليات الموكلة لي اكبر مما يمكن ان اقوم به
			17-المشاكل و النزاعات مع المرؤوسين
			18- مشاكل و نزاعات مع الإدارة

## 2/المحور الثاني:مؤشرات حدة/فرط التوتر في العمل

عبارة	عادة	احيانا	ابدا
<b>المؤشر الاول:الإرهاق الحسي و النفسي</b>			
1-أشعر بالإرهاق عند نهاية الدوام اليومي			
2-أشعر بالتعب عندما استيقظ صباحا" و أعرف أنه علي مواجهة يوم آخر في العمل			
3-أشعر بأني قد أصبحت خائر القوي عندما امارس عملي			
4-أشعر بأني ابذل جهدا" مضنيا" في عملي			
5-في نهاية الدوام أشعر كأنني قد تخلصت من القيد/الحبس			
6-أعمل مباشرة مع اشخاص يسببون لي التوتر			
7-لدي تحفظات بخصوص أهمية وظيفتي			
<b>المؤشر الثاني: تغيير الشخصية</b>			
8-أصبحت اكثر قساوة منذ أن بدأت ازاول هذه المهنة			
9-أشعر بأني اعامل بعضا" من زملائي في العمل كما لو انهم اشياء جامدة			
<b>المؤشر الثالث: الإنجاز المهني</b>			
10-من السهل علي أن اخلق مناخا" هادئا"/جو إسترخاء			
11-يمكنني حل المشاكل التي تواجهني في العمل بطريقة فعالة			
12-أشعر بأنه يمكنني التأثير بطريقة إيجابية في حياة الآخرين من خلال عملي			
13-لدي المقدرة علي التعامل بهدوء مع المشاكل النفسية في العمل			
14-أشعر بالطاقة و الحيوية			
15-لقد قمت بإنجاز/إتمام اشياء ذات اهمية/قيمة في هذه الوظيفة			
16-يمكنني بسهولة فهم ما هو شعور مستقبلي الخدمة(المرضي و المرافقين) تجاه الخدمة المقدمة لهم			
17-أتعامل بطريقة فعالة مع مشاكل مستقبلي الخدمة(المرضي و المرافقين)			

المحور الثالث:المشاكل/الشكاوى الصحية لدى العاملين

عادة = مما تسبب في عجزى عن العمل

احيانا" = تأثرت مقدرتي علي العمل

ابدا" = مقدرتي علي العمل لم تتأثر

ابدا"	احيانا"	عادة	العبرة
<b>المشكلة الاولى: الإعياء و الضغط النفسي</b>			
			1-تزايد حدة الطبع/العصبية
			2-مشاكل في التركيز
			3-اضطرابات المزاج
			4-القلق
			5-اضطرابات النوم
			6-التعب المزمن
			7- فقدان الشهية أو زيادة الشهية
<b>المشكلة الثانية: ألم العضلات،العظام و الصداع</b>			
			8-الأم المفاصل و الشد العضلي
			9-الأم اسفل الظهر
			10- الصداع
<b>المشكلة الثالثة:مشاكل صحية متعلقة بالصحة النفسية</b>			
			11-مشاكل في الجهاز التنفسي
			12-الأم في البطن
			13-حساسية في الجلد
			14-الم و ضيق في الصدر
			16-دوار، دوخة و إغماء

اشكرك جدا" علي وقتك و تعاونك . من فضلك تأكد انك لم تترك اي سؤال دون اجابة. ثم قم بإرجاع الاستقصاء للشخص الذي اعطاك اياه ...

م/إيمان أحمد عبدالله محمداني

## 5.5.2 Questionnaire (English): -

### I. Stress factors:

0 – never, 1-rarely, 2-often

العنصر	0	1	2
<b>F1 Lack of career, recognition and resources</b>			
1-Supervisor does not listen to colleagues problems			
2-May work does not correspond to my ambitions			
3-Lack of career advancement			
4-My efforts are not sufficiently appreciated			
5-Lack of resources			
6-Use of routine work habits			
<b>F2 Lack of team work and training</b>			
1-Difficult to get feedback from colleagues			
2-Lack of team work			
3-Lack of adequate in-service training			
4-Work pace controlled by others			
<b>F3 Lack of knowledge and experience</b>			
1-Work demands exceed more knowledge			
2-Mistakes caused by lack of experience			
<b>F4 Unclear work tasks &amp; ambiguity of management</b>			
1-Unclear work tasks			
2-Feeling of uncertainty when facing supervisor			
4-Mistakes arising from lack of guidelines			
<b>F5 Work overloads and conflicts in relations</b>			
1-More responsibility that I can handle			
2-Conflicts with subordinates			
4-Conflicts with administration			

ii. Burnout indicators: -

العنصر	0	1	2
<b>I1 Emotional exhaustion</b>			
1-I feel emotionally drained by my work			
2-At the end of my workday I feel exhausted			
3-I feel fatigue when I get up in the morning and I know I have to face another day at work			
4- I feel I am working too hard on my job			
5-I feel like I am at the end of my rope after my workday			
6-Working directly with people stress me too much			
7-I have reservations concerning the importance of my work			
<b>I2 Depersonalization</b>			
1-I Have become more callous since starting in this job			
2-I Feel I treat some co-workers as if they were impersonal objects			
<b>I3 Professional accomplishment</b>			
1-It is easy for me to create a relaxed atmosphere			
2-I can effectively solve the problems that arise in my work			
3-I feel I can positively influence other people's lives through my work			
4-I am able to deal calmly with emotional problems at work			
5-I feel very energetic			
6-I have accomplished many worthwhile things in this job			
7-I can easily understand how my recipients feel about things			
8-I am dealing very effectively with my recipients problems			



iii. Health complaints: -

the scale from 0 to 2, where:

0 = never, work ability is not affected.

1 = rarely, work ability is affected.

3 = often, caused work disability.

العنصر	0	1	2
<b>C1 Tiredness and mental strain</b>			
1-Increased irritability			
2-Concentration problems			
3-Mood disorders			
4-Anxiety, fear, panic attacks			
5- Sleep disorders			
6-Chronic tiredness			
7-Lack of appetite or increased appetite			
<b>C2 Musculoskeletal pain and headache</b>			
1-Joint pain and muscle tension			
2-Low-back pain			
3-Headache			
<b>C3 Immune suppression, psychosomatic health problems</b>			
1-Respiratory problems			
2-Abdominal pain			
3-Allergy/hypersensitivity			
4-Angina/heart pain			
5-Dizziness, faint			