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COPING STRATEGIES OF FIREFIGHTERS

Abstract

The firefighters experience may result an elevated risk of psychological burnout, depression, and other mental disorders due to incidents at their work. The current approach to addressing these fields tends to focus on individuals coping. This study aims to determine the effects of stress in professional firefighters, and the types of coping strategies among Olson's Multisystem Assessment of Stress and Health (MASH) model. Eighty-two professional firefighters participated in this research from five urban fire departments. The Coping Inventory for Stressful Situations and Coping and Stress Profile were used to exam coping strategies. The survey shows that the members of the intervention staff are exposed to the greatest stress during their work. The vast majority of the stock responds to stress with adequate coping strategies. This suggests that firefighters are increasingly exposed to stress during their work and should be provided with more training and psychological support for dealing with work stress. As the data were not subjected to statistical analysis, the results are not considered scientifically relevant.

Keywords: Work stress, Posttraumatic stress disorders (PTSD), Psychological burnout, Resilience



TŰZOLTÓK MEGKÜZDÉSI MECHANIZMUSAI

Absztrakt

A tűzoltók feladatellátásuk során nagyobb kockázatnak vannak kitéve a pszichológiai kiégés, a depresszió és más mentális rendellenességek kialakulása tekintetében. Ezen problémák pszichológiai kezelési lehetőségei az egyéni megküzdési stratégiákra fókuszálnak. A tanulmány célja, hogy bemutassa a hivatásos tűzoltók körében előforduló stressz hatásait, valamint a megküzdési stratégiák típusait az Olson Multisystem Assessment of Stress and Health (MASH) modell felhasználásával. A bemutatásra kerülő kutatásban öt városi tűzoltóság részéről 82 hivatásos tűzoltó vett részt. A megküzdési stratégiák vizsgálatához a „Stresszesemény leküzdése” valamint a „Megküzdés és Stressz Profil” kérdőívet alkalmaztuk. A felmérés eredményei azt mutatják, hogy a „vonulós” állomány tagjai munkájuk során jelentős mértékben vannak kitéve a stressz-hatásoknak és az állomány döntő többsége adekvát megküzdési stratégiákkal reagál azokra. Mindez arra utal, hogy a vizsgált populáció számára a munka jellege miatt több képzést és pszichológiai támogatást kell biztosítani, mely hozzájárul a munkahelyi stressz-kezeléshez. Mivel az adatokat statisztikai analízis alá nem vetettük, azok nem tekinthetők tudományosan relevánsnak.

Kulcsszavak: munkahelyi stressz, poszttraumatikus stressz zavar (PTSD), pszichológiai kiégés, reziliencia

1. INTRODUCTION

Numerous investigations have identified emergency service workers - like firefighters are - experience constant and intense stress in their specific tasks, so there is a high-risk factor in their population to burnout and other mental disorders such as anxiety, depression, alcoholism, posttraumatic stress disorder (PTSD) and suicide [1, 2]. Studies of the health status of firefighters have recently revealed cardiovascular areas too. According to Smith's (2019) study



[3], cardiovascular disease¹ is the leading cause of on-duty death (45%) and unfortunately a major cause of morbidity [4]. Furthermore, Smith (2019) carried out a retrospective study (1999-2014 among 18-65 years of age) and showed sudden cardiac death duty-related.

Constantly living in stressful situations results in this population not only physical but also mental illness. It is a cardinal psychological field question: how to cope the firefighters with stress experienced at their work. Although we have a lot of research literature on stress and coping processes, it is important to learn and research even more about the psychological effects on firefighters.

Shocking example in 2007 the wildfires have devastated huge areas in the Peloponnese, Greece. Theleritis (2020) examined coping mechanisms and their relation to PTSD in Greek firefighters one month after that event [1]. They visited the affected area and each involved professional firefighters were interviewed by them. They investigated the psychological effects and provided support. One hundred two people were on duty and filled several questionnaires (e.g. Albert Einstein College of Medicine-Coping Style Questionnaire (AECOM-CSQ) [5]. A total of 18.6% of the participants were found to have PTSD according to the ICD-10² classification of mental health and behavioural disorders diagnostic criteria recommended by World Health Organization. The results showed that Greek firefighters using mostly minimization and blame with difficulties in their coping which are associated with PTSD. According to a lot of research specific coping mechanisms used by them and might contribute to the development of PTSD. We expect them a lot of competence for example to have good physical fitness, confidence, psychological resilience [6], good communication skills, and of course the ability to work under pressure.

This research was designed to determine the effects of stress in professional firefighters, and the types of coping strategies.

¹ This is a general term for conditions affecting the heart and blood vessels (also called heart disease).

² International Statistical Classification of Diseases and Related Health Problems



2. METHODS

Participants

Eighty-two male professional firefighters participated in this research with a minimum of 20 years old and maximum of 47 from five urban fire departments [7].

Procedure

Endler's (1999) The Coping Inventory for Stressful Situations (CISS) [8] is a 48-item self-report inventory that measures stress-coping methods9]. In three dimensions containing 16 items:

1. Task-oriented coping refers to treating a stressful situation as a problem resolution, and tackling it;
2. Emotion-oriented coping refers to aims at reducing stress in a difficult situation, rather than tackling the problem.
3. Avoidance-oriented coping refers to postpone the stressful situation.

A self-report questionnaire called Coping and Stress Profile (CSP) is a multidimensional and biopsychosocial model that was developed by Olson (1996, 2007) applied the multisystem assessment of stress and health (MASH) model [10]. MASH model examines the effects of 'demands' (stressors) and 'coping resources' on 'adaptation' on the individual level. These components are a measure of stress at four system levels: individual, couple, family, and work in twelve scales focus on dynamic effects. (See Table 1)

Table 1 - Coping & Stress Profile® Scales [10]

Stress	Personal, Work	Personal Stress
		Work Stress
Coping Resources	Personal	Problem Solving Style
		Communication Style



		Closeness Style
		Flexibility Style
	Work	Problem Solving Style
		Communication Style
		Closeness Style
		Flexibility Style
Satisfaction	Personal Satisfaction	
	Work Satisfaction	

3. RESULTS

The Coping Inventory for Stressful Situations

94% of respondents use a task-oriented strategy for the most part to overcome their problems. The remaining 6% can be divided into four parts and emotion-oriented coping as their main strategy. Based on their response just 1 person of the respondents can be classified as those who like the avoidance strategy. (See Figure 1)

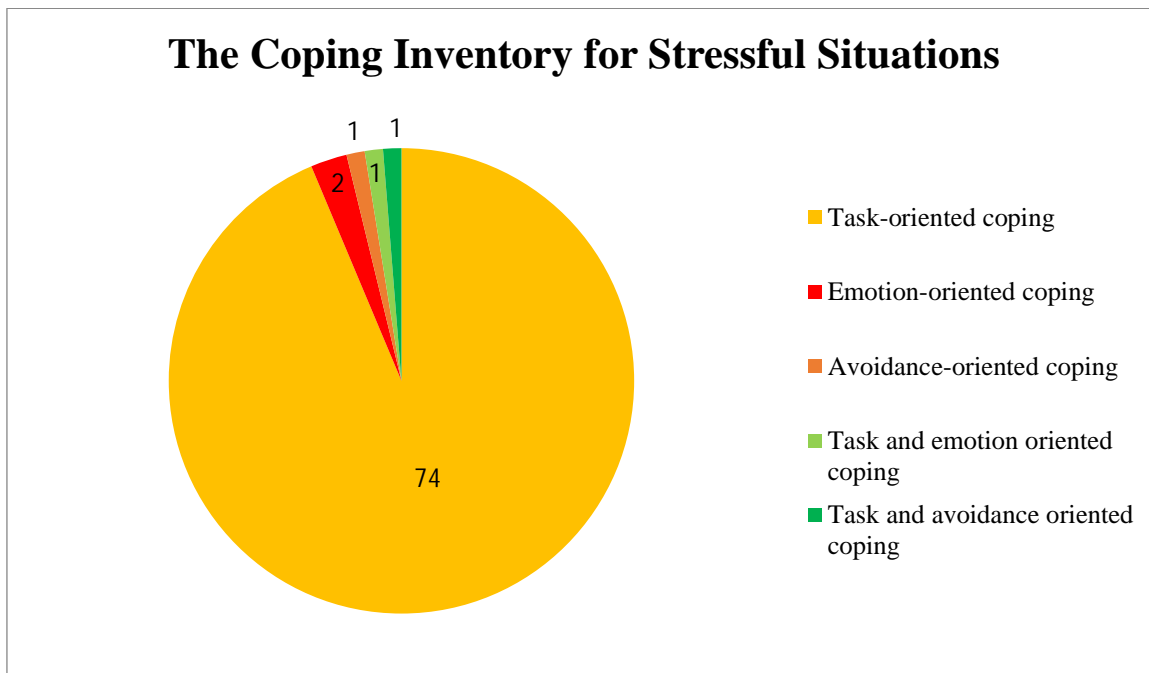


Figure 1 - Results of The Coping Inventory for Stressful Situations

Coping and Stress Profile

Most of the participants not satisfied with the work schedule, their salary and benefits, work supervisors, work relationships, and job characteristics. (See Figure 2). The work stress scale is highlighted by 12 scales, with 58% of the firefighters rated it as high and 6% as very high for work-related stress.

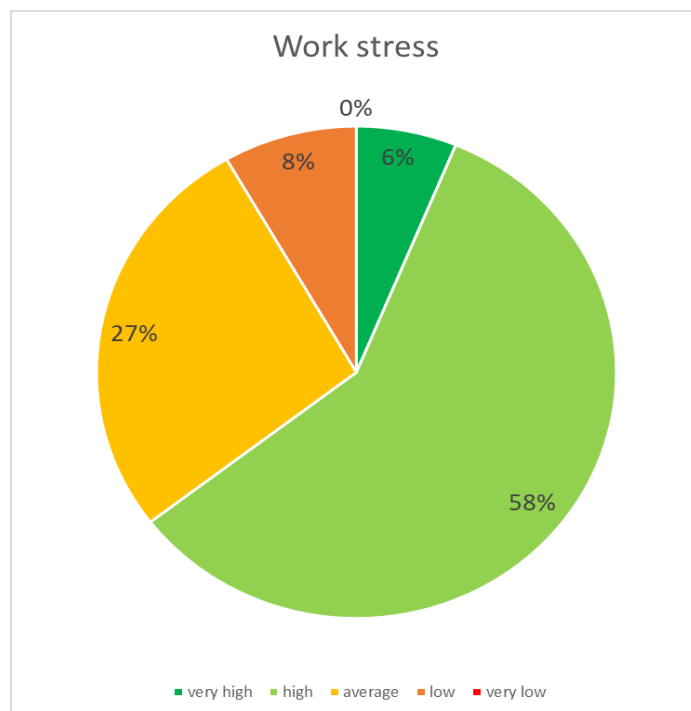


Figure 2 - Work Stress

The Problem Solving skills are a very useful resource how to manage stressful situations. A person with high Problem-Solving skills tends to deal with stress more effectively therefore it is very important in experiencing stress professions. For example, it belongs to how well the person can create new ideas and solutions. (See Figure 3). The chart shows a comparison of professional firefighters problem solving skills versus the average population's.

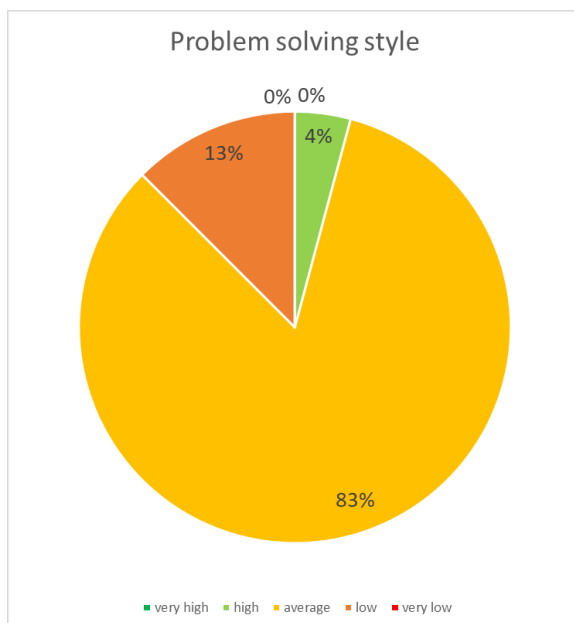


Figure 3 - Problem solving style

Cognitive flexibility is the ability to use different strategies when necessary. From personal aspects, flexibility focuses on the ability to relate to others, from work aspects to assess and adopt changing circumstances. (See Figure 4)

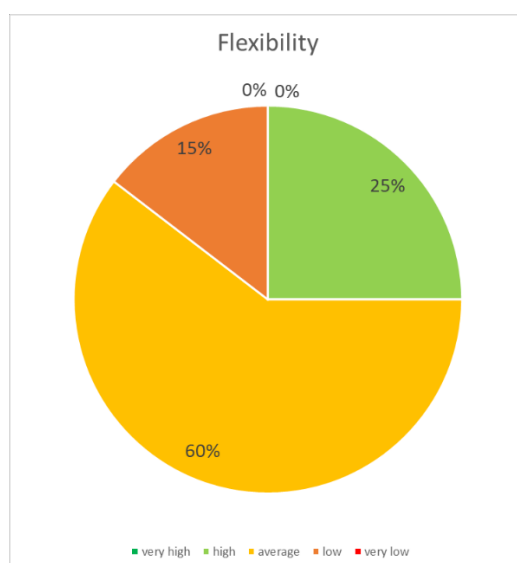


Figure 4 - Flexibility



Communication is essential in many areas of life. Lack of information can cause great problems in the co-operation within an organization. Half of the respondents say there is a high level of communication in their workplace. (See Figure 5)

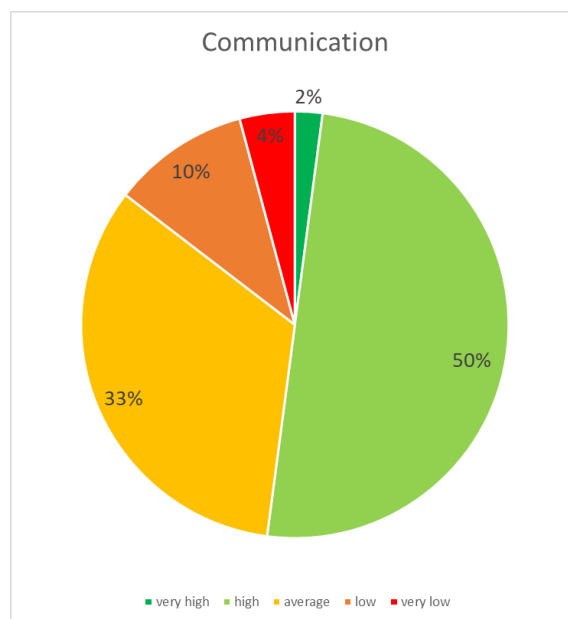


Figure 5 - Communication

For firefighters, the cohesion of the group, the cohesion among the members, and the trust in each other are of extremely importance. In the event of their improper operation or absence, the performance of the task may be compromised and its efficiency may be reduced. Most of the respondents believe that the relationship between staff is strong. (See Figure 6)

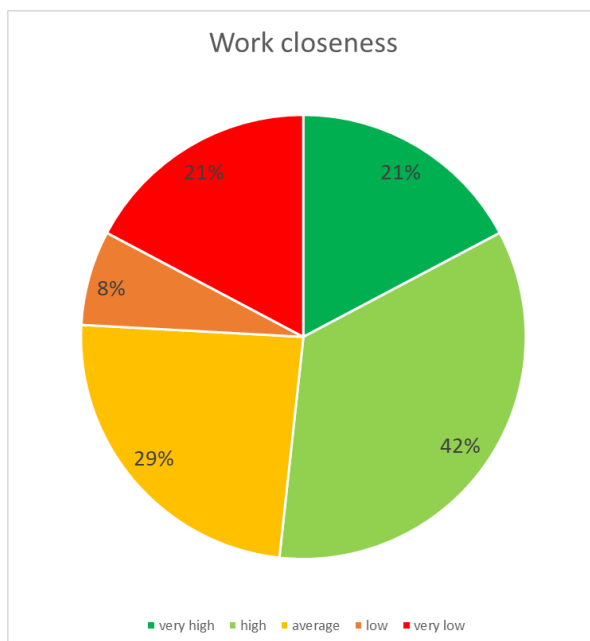


Figure 6 - Work closeness

Work satisfaction is one of the most transparent measure in any professions, organisation and ultimately the life of an individual. Generally speaking the work satisfaction effects on life satisfaction and vice versa. It means that the higher the satisfaction level the better the resistance against work stress. Amongst the analysed population of the professional firefighters only 38% choose high satisfaction, and other 38% is an average. (See Figure 7)

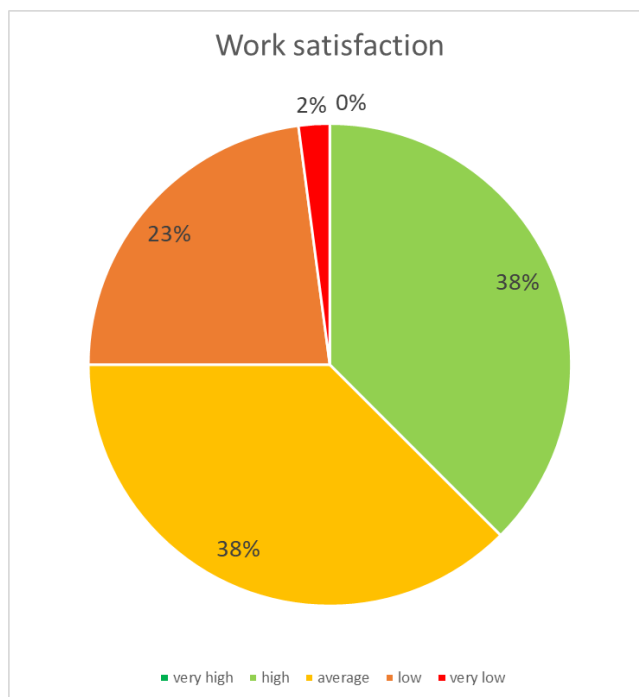


Figure 7 - Work satisfaction

4. DISCUSSION

Overall, the surveys show that the members of the intervention staff who fill in the questionnaires are exposed to the greatest stress during their work, which means an above-average burden on them. The vast majority of the stock responds to stress with appropriate coping strategies, but 20% of them showed above-average results for avoidance issues.

Coping and Stress Profile doesn't take into account job specifics, so "I'm trying to look at the humorous side of the situation." sentence evaluation on a fire department, it is almost inconceivable to show a negative result.

The findings of the study only provides us with an impression how stressful the working life of professional firefighters and as a result how exposed are them to certain consequent disaeses. They need more support during and after their duty hours [11].



As a matter of fact this area of psychological analysis worth to continue and actions taken based on that could support longer service period, healthier and happier life for professional firefighters.

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