

Active Breaks Associated with Burnout Syndrome in the Police Population

Andrés Alexis Ramírez-Coronel^{1,3}, Mariuxi Katherine Valencia-Naspu¹, Pedro C. Martínez Suárez², Rosa Elvira Minchala Urgilés⁴, Narcisca Godoy Dután¹, Ignacia Margarita Romero Galabay¹, Luis Eduardo Burgos Benavides⁵

¹ Faculty of Nursing at the Catholic University of Cuenca, Azogues Campus.

² University of Oviedo.

³ Psychometry Laboratory of the Center for Research, Innovation and Technology Transfer (CIITT) of the Catholic University of Cuenca.

⁴ José Carrasco Arteaga Specialty Hospital (IESS), Cuenca.

⁵ Brother Miguel de la Salle Educational Unit, Cuenca.

Abstract:- The labor stress is known as harmful reactions for the organism that affect in the psychological and physical scope, this one takes place when the exigencies of the employment surpass the capacity of the worker. The main objective is to determine the association between the active pauses (physical activity) and the dimensions of the syndrome of Burnout, in the personnel of police of the city of Azogues, Ecuador. Within the study, quantitative, descriptive, analytical, comparative, prospective and non-experimental research was applied. The following instruments were used to collect the information: Maslach Burnout Inventory and IPAQ International Physical Activity Questionnaire. A descriptive analysis of the variables was carried out, and the results were expressed in frequencies and percentages presented in tables. Subsequently, the correlation analysis between the variables was carried out with Spearman's Rho correlation (hypothesis 1). And to check hypothesis 2 and 3, the Mann Whitney U test was performed. The statistical program SPSS 26 was used for data analysis.

Keywords:- Police, Active pauses, Burnout syndrome.

I. INTRODUCTION

The present investigation is focused on the effectiveness of active breaks (physical activity) related to the level of labor stress, since stress is considered the disease of the century. According to Mikhail (1981), he defines stress as a psychological and physiological state that occurs when certain characteristics of the environment challenge a person and produce a real or perceived imbalance in what is thought or its capacity to adjust to it, situations that derive from the undefined response (1).

The main characteristic of this type of problem is that it affects both the psychological and physical levels, causing major health complications. To analyze this problem, it is necessary to mention the causes or stressing factors, which can be the overload of work, the conditions, the working hours, lack of companionship.

The investigation of this problem was carried out due to the interest of investigating how work stress affects and with it the need to implement active breaks (AF) for the benefit of professionals of the police headquarters of the city of Azogues.

To investigate in the bibliographical search from the antecedents of the active labor pauses, its legal frame and investigations around the subject, as well as the possible investigations made, pretending, to have a greater knowledge and approach of which it knows or knows.

The World Labor Organization (ILO), defines labor stress as the physical and psychological response caused by the instability between the requirements of the job and the capacity of the worker (2).

In Latin America, according to surveys conducted by the ILO in 2012, more than 10% of those surveyed said they felt under stress, sad or depressed, with insomnia due to worries about work. The World Health Organization (WHO) estimates that worldwide 5 to 10% of workers suffer from work-related stress, and in industrialized countries 20 to 50% (3).

In 2019, studies on occupational stress were conducted in countries such as Argentina, where 26.7% of workers reported having stress, while in Brazil 14% and in Chile 27.9% (4).

In Ecuador, 10% of the population has occupational stress according to surveys conducted by the company GFK, which were applied in Quito and Guayaquil to 1,006 workers (5). Therefore, it is of utmost importance to take a few minutes of the working hours to oxygenate and exercise the body in order to prevent diseases. This avoids "too much work and not enough movement", taking into consideration that staying several hours in the same position and doing the same activity can cause serious physical and mental health problems, which will result in the worker not performing in a timely manner.

It is important to take short breaks during work in order to recharge energy, to optimize performance and effectiveness, through different methods and physical activity that helps reduce work fatigue, muscle disorders and prevent stress, which is determined "active break.

Nowadays it is known that people in the work, social and family environment have to fulfill several functions at the same time or simply have workload, problems typical of a home, economic, affective and social problems which originates as the commonly known stress that is presented as the current disease of the twentieth century.

The impact that is originating the labor stress is of negative character when knowing that the person presents/displays symptoms like problems of dream, irritating attitudes, anguish, incapacity to take the things with calm, greater risk than the person suffers accidents during the accomplishment of its work, tendency to undergo addictions, worsening of the physical state, acquiring cardiac diseases, diabetes, among others, syndrome of burnout, depression affecting that the individual does not yield in its totality (7).

According to the basic guide of prevention of labor risks of the police, it is a collective where the risks are part of the inherent performance of the position, every day they face the fact of facing or trying to avoid suicides, the aggressions of street gangs, domestic fights, infantile mistreatment, traffic accidents and attention in the catastrophes, for which they are put under a high degree of stress (8).

Studies made by the security confederation indicate that 65% of the agents suffer from stress and 50% present sleep alterations as one of their possible effects. At an international level, the investigations developed show a ranking of health indicators of stress, in the police profession it presents high parameters such as alcoholism, suicide, digestive and cardiac disorders, negative psychological states (emotional wear, frustration, depression, anxiety, anger...) and sleep disorders (9).

Therefore, the following questions must be answered with this research:

- What is the relationship between the effectiveness of active breaks and work stress, in the personnel of the police headquarters?
- What are the differences between headquarters staff and the effectiveness of active breaks and work-related stress?

This study is justified in the following way: when performing active breaks or physical activity the body releases endorphins which help to reduce the level of stress and fatigue, a stressed worker does not contribute 100 percent in their activities, this may be due to different factors such as the demands of the company exceed the capacity of the worker or excessive working hours.

The present project is of significant importance since it emphasizes that companies must recognize workers as a valuable resource that should be and feel good and happy, so that it delivers all its potential and is of great benefit to the company and the collaborator, from the perspective of the department that manages human resources and occupational health and safety active breaks provide the company the relevant reduction of stress, visual fatigue, back pain, among others, related to work.

Therefore, considering that active breaks are the key methods to prevent occupational risks and thus guarantee the well-being of an employee, it is necessary for companies, both public and private, to implement systems that promote "active breaks", considered as miniscule interruptions in the work activity to perform some exercises to minimize fatigue and also to prevent some musculoskeletal disorders.

The main benefits sought by this research are directly related to the welfare of workers, equally for the management of organizations, since it will undoubtedly improve the functioning of the latter, through the good performance of workers.

Likewise, the work will benefit the institution where the research is carried out, since it is a population where few studies have been carried out on this problem, so that it has a valuable social contribution, which from the research will present parameters of emotional and cognitive order for the medical evaluation of the workers. According to the American psychological association, in the United States one third of the population lives in a state of extreme stress, while nearly half (48 percent) consider that their stress has increased in the last five years (10).

According to the general council of psychology of Spain, people working in public institutions (50.7%), and employees with independent jobs or self-employment (41.4%) (11).

In Argentina, measures are being taken to combat the so-called "burnout syndrome", also known as the burnout syndrome, an emotional disorder that is linked to the work environment, stress caused by work and the employee's lifestyle. Days to share music through instruments looking for common interests, talks with psychologists and neurologists where they talk about current topics of interest, a day of aesthetic treatment that can include massages, nap services where a bed can be reserved for 30 minutes to sleep during lunch time are some of the tools they use (11).

As it can be known in neighboring countries since past years their companies have already implemented the active break which has been of good impact that has contributed to the success of the companies. With what it has been contextualized to the active pauses - or compensatory labor gymnastics, like a short routine of specific and simple exercises that are executed in the same work place, having the duration of approximately 10 minutes, being basic and

functional, incorporating to the muscles, mobility of joints, stretching and relaxation of the body (12).

In Peru, the General Office of Statistics and Information and Communication Technologies of the Ministry of Labor and Promotion of Employment, reports that only five cases of MSDs were reported up to May 2017, that is, there is a gap in the information corresponding to the actual number of cases. The possible causes of the lack of reports could be the scarce number of doctors dedicated to making these diagnoses or the lack of notifications from the organizations that are obliged to report their cases, according to Law 29783 on Safety and Health at Work (13).

In Ecuador, 10% of the population suffers from occupational stress, according to surveys carried out by the company GFK, which were applied in Quito and Guayaquil to 1,006 workers (5).

In the city of Tungurahua, according to the study carried out by Sánchez, 60% of the interviewees said they were under stress (14). At the local level (Azogues - Cañar) there are no studies carried out related to work stress.

According to the International Labor Organization (ILO), it is necessary to design work policies and programs for the prevention of health and safety at work aimed at preventing stress and aimed at increasing worker satisfaction. In this complex context, the workplace is both a major source of psychosocial risk factors and the ideal setting for addressing them in order to protect workers' health and well-being through collective action (15).

For the International Labour Organisation (16), stress is the physical and emotional response to harm caused by an imbalance between an individual's perceived demands and his or her perceived resources and capabilities to cope with those demands.

According to the WHO, stress is related to the demands and pressures that the worker may have as they do not match his or her ability and knowledge to cope, and can be made worse when the employee does not feel supported by his or her bosses and colleagues (17).

While the European Commission on Safety and Health at Work defines it as, 'the harmful physical and emotional reactions that occur when the demands of the job do not match the worker's capabilities, resources' (18).

From a physiological and biological approach, it has been shown that stress has always existed. Different types of stressors, such as organizational structures, group and interpersonal relationships, demand and work content, can interfere with factors outside the company such as family and social factors (19).

There are 3 types of work stress: (1) Alert: it is the first phase and one of the most important since it detects the stressor, and the body activates the whole organism, which can cause hormonal, glandular, digestive and respiratory changes. (2) Resistance: a physical and psychological fatigue is produced when trying to adapt to the new situation of stress. (3) Exhaustion: last phase where the stress factor increases or is permanently prolonged, causing health problems (20,21).

➤ *Consequence of occupational stress on the worker*

When trying to adapt to stress the body develops the appearance of symptoms that usually put the health of the worker at risk, the following alterations can occur: Physical alterations (Gastritis, Colitis and Functional Dyspepsia, Aerophagia), Respiratory alterations (Dyspnea, Tachypnea and Choking sensation), Alterations of the immunological system (Frequent infections) Psychological alterations (Excessive worry, Decrease in concentration, Frequent forgetfulness, Mental blocks, Insomnia, Addiction to narcotics (22).

According to Slipack there are two types of work stress which are (1) episodic (when the stress is momentary because it is faced or disappears) and chronic (inadequate work environment, overwork, increased responsibilities and important decisions). Chronic stress manifests itself when the worker is repeatedly subjected to the stressor, the more he is subjected to it, the more the stress will increase and not disappear (23).

➤ *Active Breaks*

According to PAHO, one third of life is spent in the workplace, and by working eight hours or more a day we can become negligent of the demands of the human body (24). For this reason, there is a great possibility of acquiring pathologies that can affect the psychological and physical area of the worker. This is related to the assigned workload, which is why companies have developed short periods of dispersion for workers called active pauses, which consist of spaces for rest during the work day, helping to recover energy and motivating workers to achieve better performance (25).

By not taking active breaks, staff can increase the frequency and duration of work incapacities, physical activity in the workplace is leading to an improvement in lifestyle, and physical activity should be carried out for at least 30 minutes a day (26).

The active pause or physical activity is thought as a system of prevention and at the same time of promotion of the health since from the year 2005 the law of Sanitary Authority was applied where it establishes the commitment of the companies so much public as private to carry out activities that promote the realization of active pauses since their benefits are numbers among them we have the following levels (27): psychic and physical.

The psychic level is the help to diminish the stress, increases the coordination since it creates a tranquilizing and antidepressive effect, this is due to that a secretion of endorphins exists, also diminishes the dream. And the physical level is Decreases the heart rate at rest, helps to avoid diseases such as osteoporosis, obesity and increases the effectiveness of respiratory muscles (28).

According to the Chilean safety association (ACHS), taking an active break from work has advantages in three aspects: physiological (helps to extend muscles and joints, improves elasticity of muscles and tendons, prevents early onset of muscle fatigue), productive (breaks with the daily work routine, helps concentration, optimizes the worker's performance at work) and psychological (reduces stress, motivates workers, improves work climate).

The following types are listed according to the active guidelines (30):

- Preparatory: it is done before the working Jordanian or it can be after the lunch hour, where stretching exercises are done preparing the body by segments.
- Compensatory: it is done in the middle of the work day, the idea being that in a short time the body is activated, which is diminished by the work day.
- Relaxation: It is done at the end of the work day or before a high-level meeting.

Carrying out a study that covers the methodology of active breaks will help to reduce fatigue and stress at work, through this the staff will avoid that stress at work affects negatively the psychological and physical health of the workers, taking into account that a stressed worker will not be motivated and will usually get sick more often, that is, he will work unmotivated, which will affect the employee and the organization.

➤ *Active breaks in police*

It is vitally important that police personnel have physical and mental capacities that allow them to develop both their physical and mental abilities, according to the Encyclopedia of Health and Safety at Work, published by the International Labour Organization (ILO), which states that it is clear that the work of police officers is stressful. Many officers perceive excessive administrative work, which distracts them from direct surveillance activity, as a major stress factor. The shift work system, coupled with uncertainty about what can happen during the shift, contributes to stress. In periods of budgetary constraints, these stressors are exacerbated by staff shortages and insufficient equipment. Situations likely to degenerate into violence are inherently stressful, and stress is significantly exacerbated if understaffing complicates the provision of

support or if the police officer faces significant work overload (9).

In accordance with the provisions of Resolution No. 1016 of 1989 issued by the Ministry of Labour and Social Security for the general regime and the provisions of Agreement No. 025 of 2003 by the Higher Health Council of the Military and National Police Forces, the occupational health programmed must be made up of two subprograms: preventive and occupational medicine and the occupational safety and hygiene and basic environmental sanitation subprograms. The occupational safety subprograms has established a programmed of active breaks or occupational gymnastics with the aim of encouraging police officers to practice sport, physical education and recreation (32).

According to the study carried out by Castro, Orjuela, Lozano, Avendaño and Vargas (33), police officers bear high stress loads in comparison to other workers, because they are exposed to violent situations that can be harmful, Therefore, the emphasis is on implementing programs that not only reduce stress but also prepare physically and emotionally for authority, physical and emotional detachment, assertiveness, professionalism and efficiency, since unlike other professions, police officers must simultaneously comply with, enforce the law and satisfy the service of clients .

The general objective was to determine the association between active breaks (physical activity) and the dimensions of Burnout syndrome, in the police personnel of the city of Azogues in the period September 2019 - February 2020.

In order to respond to the general objective, the following specific objectives were set: (1) To analyze sociodemographic factors, active raisins (Physical Activity), work stress and burnout dimensions, (2) To establish correlations between seniority and stress with the dimensions of burnout syndrome (Personal Exhaustion and Depersonalization) and active breaks (PA), according to gender and (3) Correlating stress with the dimensions of burnout syndrome (Personal Development and Depersonalization) and active breaks (AF), according to length of service and total population.

And to respond to each specific objective, the following hypotheses were put forward: (a) The effectiveness of active guidelines is directly related to work stress, (b) What differences exist between male and female police chiefs, according to the dimensions of work stress (emotional exhaustion, depersonalization and personal fulfillment) and (c) What differences exist between police chiefs, according to the effectiveness of active guidelines.

II. METHODOLOGY

Quantitative, descriptive-correlational, analytical, prospective and non-experimental study. The sample was made up of the personnel working at the Police Headquarters, a total of 300 police officers (the entire universe). The inclusion criteria were: active police personnel, accepting to participate in the research and aged between 20 and 65. This research was based on the ethical principles of the Helsinki Declarations.

The data collection was done through the application of surveys, questionnaires will be applied which will be anonymous and is composed of the following sections:

- Socio-economic survey: gender, age, marital status, level of schooling, work area, years of service.
- Maslach Burnout Inventory (MBI) (1981, 1986), which consists of 22 items that evaluate 3 subscales, emotional exhaustion, depersonalization and personal fulfillment at work, is an instrument, translated into Spanish, has been validated by Gil Monte (35) in 2002. 90 which corresponds to item 1,2,3,6,8,13,14,16 and 20 ,0.76 for Depersonalization corresponds to item 5, 10,11 ,15 and 22 and of 0.76, for Personal Accomplishment the items are 4,7,9,12,17,18,19 and 21 at work (36). The instrument's assessment standard is a 7-point Likert scale from 0 to 6 where 0 is never, 1 is sometimes a year or less, 2 is once a month or less, 3 is sometimes a month, 4 is once a week, 5 is sometimes a week, and 6 is every day (35).

- International Physical Activity Questionnaire (IPAQ): This consists of 7 questions that measure physical activity through four domains: work, home, transportation, and free time, which is evaluated in minutes/week and categorically as low, moderate, and high (37) The questionnaire was validated by the Karolinska Institute, the University of Sydney, the World Health Organization (WHO), and the Centers for Disease Control and Prevention (CDC) in 1996. Weekly activity is recorded in Mets (Metabolic Equivalent of Task or Metabolic Index Units) per minute and week where walking is 3.3 Mets, moderate physical activity 4Mets and physical activity 8 Mets.

A descriptive analysis of the variables was performed, and the results were expressed in frequencies and percentages and presented in tables. Correlational analysis was then performed between the variables with Spearman's Rho correlation (hypothesis 1), as this test was adequately vigorous when faced with the fulfillment of non-parametric assumptions. And to test hypothesis 2 and 3, Mann Whitney's U test was performed. The SPSS 26 statistic was used for data analysis.

III. RESULT

Below are the results derived from the information gathered through the instruments applied to the personnel of the police headquarters; distribution tables are presented with frequencies and percentages, with the respective analysis that give an account of the findings of the investigation.

		F	%
Gender	Female	137	47,6
	Male	151	52,4
Age	20 to 25 years	51	17,7
	26 to 30 years	67	23,3
	31 to 40 years old	34	11,8
	41 years onwards	136	47,2
Marital status	Married	110	38,2
	Single	96	33,3
	Widowed	54	18,8
	Divorced	28	9,7
Work area	Administrative	147	51,0
	Operation	141	49,0
Length of service	1 to 5 years	97	33,7
	6 to 10 years	129	44,8
	11 years in advance	62	21,5
Schooling	Primary	26	9,0
	Bachelor	111	38,5
	Third Level	151	52,4

Table 1:- Analysis of sociodemographic factors of police personnel

There is a greater number of male staff with 52.4%, while the highest percentage in age is from 41 years onwards with 47.2%. It can be seen that 38.2% of staff are married and 51% work in the administrative area, while 44.8% have 6 to 10 years of service, the highest level of education is third level with 52.4%.

Active pauses		F	%
	Medium	93	32,3
	High	195	67,7
Stress ranges			
	Absence	203	70,5
	Presence	85	29,5

Table 2:- Analysis of active breaks (Physical Activity).

According to the data collected on active breaks (AF), there is a higher percentage of physical activity with 67.7%. And with regard to the level of occupational stress, 70.5% did not present stress

Burnout Dimensions	Exhaustion	Under	F	%
		Medium	37	12,8
		High	134	46,5
	Personal Development	Under	117	40,6
		Medium	29	10,1
		High	141	49,0
	Depersonalization	Under	118	41,0
		Medium	273	94,8
		High	15	5,2

Table 3:- Analysis of the dimensions of burnout syndrome

Of the three dimensions of burnout syndrome, it was determined that the personnel had an average percentage of exhaustion with 46.5 and high exhaustion with a percentage of less than 40.6%, while in personal performance at work they had an average percentage of 49.0% and in depersonalisation a low level of 94.8%.

			Exhaustion	Realisation Staff	Depersonalization	Physical Activity	Stress
Female	Length of service	C	,206*	0,072	,171*	0,083	0,15
		P	0,016	0,403	0,045	0,334	0,079
	Workplace Stress	C	,938**	,900**	,940**	0,002	---
		P	0,000	0,000	0,000	0,985	---
			137				
Male	Length of service	C	,293**	,168*	,263**	0,038	,236**
		P	0,000	0,039	0,001	0,643	0,003
	Workplace Stress	C	,919**	,907**	,929**	0,071	---
		P	0,000	0,000	0,000	0,390	---
			151				

Table 4:- Correlations between seniority and stress with the dimensions of burnout syndrome (Self-Realization and Depersonalization) and the effectiveness of active breaks (AF), according to gender.

In the female sex there is a correlation between service seniority with total burnout and total depersonalization, and in the male sex there is a correlation between service seniority and the 3 dimensions of burnout and stress. On the other hand, total stress is correlated with the three dimensions of burnout.

	Seniority		Exhaustion	Personal Development	Depersonalization	Physical Activity
Stress	1 - 5 years	C	,917**	,901**	,929**	-0,017
		P	0,000	0,000	0,000	0,866
	97					
	6 - 10 years	C	,935**	,917**	,942**	0,151
		P	0,000	0,000	0,000	0,087
	129					
	> 11 years old	C	,907**	,909**	,889**	-0,197
		P	0,000	0,000	0,000	0,125
	62					
	1 a >11	C	,927**	,903**	,934**	0,037
		P	0,000	0,000	0,000	0,531
	288					

Table 5:- Correlation of stress with the dimensions of burnout syndrome (burnout, personal fulfilment and depersonalisation) and the effectiveness of active breaks (AF), according to length of service and total population (1 to >11).

The correlation between stress and the dimensions of burnout syndrome, active breaks according to length of service which is 1 to 5, 6 to 10, 11 years onwards and 1 to 11 i.e. its totality there is a correlation between the three dimensions which are burnout, self-fulfilment and depersonalisation.

IV. DISCUSSION

The study was carried out in 280 police officers in the city of Azogues, where there is a greater number of male personnel, the average age is 41 years and older, there is a greater average of married personnel and the highest percentage belongs to the administrative area and with a greater prevalence of third level education, in which their level of active breaks (AF) was calculated, classifying them in high and medium where there is a greater percentage of high physical activity with only (67.7%) and medium (32%), according to the study carried out by Constante (39). The level of physical activity is good at 567% and excellent at 23%.

As for the work stress variable, according to the study carried out by de Liz, Cirimbelli, Arab, da Silveira, Cunha (40). The (25.89%) has tolerable stress, while the study conducted by Diaz and Tinoco (41). Where only (9%) present stress and (35%) present average stress, while in another study conducted the prevalence of stress among the people surveyed was (11.65%) (42). While in the research that was carried out a (29.5%) have occupational stress.

By means of the Burnout test it was possible to measure 3 subscales that are Exhaustion, Personal Performance and Depersonalization which was classified as low, medium and high, where it was determined that the personnel has an average percentage of exhaustion with (46.5%) medium (40.6%) and finally low with (12), 8%) and high exhaustion with a lower percentage (40.6%) while in personal accomplishment at work it has a medium percentage with (49.0%) followed by high with (41%) and low with (12.8%) and in depersonalization a low level with

(94.8%) followed by medium with (5.2%), while the study carried out by Sanchez (43).

In which I present a greater frequency in personal realization with (36.9%), followed by depersonalization (16.8%) and finally emotional exhaustion (6.6%). While the study carried out by Valladares (44). (56.3%) have a medium degree of emotional burnout and (21.9%) have a high and low degree of emotional burnout, while in depersonalization (43.8%) have a medium degree of depersonalization, (32.8%) have a low degree and (23.4%) a high degree and in professional effectiveness (54.7%), a low degree, (26.6%) have a medium degree and (18.8%) a high degree.

Regarding the correlation between seniority and stress with the dimensions of burnout syndrome (Personal Exhaustion and Depersonalization) and the effectiveness of active breaks (AF), according to gender in the female sex there is a correlation between seniority of service with total burnout and total depersonalization, and in with the total stress it has a correlation in the 3 dimensions of burnout which are exhaustion, personal realization and depersonalization and in the male sex there is a correlation between seniority in service and the 3 dimensions of burnout syndrome and with stress. On the other hand, total stress is correlated with the three dimensions of burnout syndrome, according to Arias (45).

Where in Emotional Exhaustion (40%) is moderate and severe in the female sex and only (25%). in the male sex while Severe Depersonalization (70%) in the female sex and in the male sex (56%) severe and Personal Realization the highest index is (62%) in the female sex and male sex with (51%).

A correlation was made between stress with the dimensions of burnout syndrome (burnout, personal fulfilment and depersonalisation) and the effectiveness of active breaks (AF), according to length of service and the entire population (1 to >11 years) where data was obtained that according to length of service is 1 to 5, from 6 to 10,

from 11 years onwards and from 1 to 11, that is to say, there is a correlation between the three dimensions of exhaustion, personal fulfillment and depersonalisation, unlike the study carried out by Sánchez (34). Work seniority is only related to emotional exhaustion.

V. CONCLUSIONS

The labor stress is acquiring interest at world-wide level and is to that increased its numbers getting to be alarmante, for that reason institutions at world-wide level like World-wide Organization of the Health, the Pan-American Organization of the Health, the World-wide Organization of the work among others, have decided to take actions as much to prevent as to cure since of not being treated it can cause serious problems of health at physiological level like psychological for that reason the implementation of the active pauses (Physical activity).

According to the research carried out, a socio-demographic analysis was made of the effectiveness of active breaks (physical activity), work stress and the dimensions of burnout syndrome among police personnel established in specific objective one, the highest percentage has 6 to 10 years of antiquity as far as the effectiveness of the active pauses all the members make physical activity only that exists greater prevalence in high frequency that in the average frequency in labor stress exists a greater number of personnel who do not have stress, in the subdimensions of syndrome of burnout or syndrome of burnout three frequencies were established low average and high where Exhaustion had a greater was average, and in personal accomplishment the greater percentage was average and finally depersonalization with a low index.

In order to respond to objective two, a correlation was made between seniority and stress with the dimensions of burnout syndrome (depersonalization and work performance) and the effectiveness of active breaks (AF), according to gender, where it was determined that in the female sex there was a correlation between seniority in service with burnout and depersonalization, and the total stress has a correlation with the 3 sub-dimensions the burnout syndrome, while in the male sex the seniority of the service has a correlation with the 3 sub-dimensions the burnout syndrome and with the stress variable while the total stress only with the 3 sub-dimensions.

In objective three, a correlation was made between stress with the dimensions of burnout syndrome (Exhaustion Personal Realization and Depersonalization) and the effectiveness of active breaks (AF), according to the length of service and the total population (1 to >11 years), where from 1-5 of 6-10 of 11 years onwards there is a correlation with the 3 sub-dimensions of burnout syndrome.

For the realization of the research, 3 hypotheses were planted where according to the research it was determined that occupational stress is not related to the level of physical activity. In hypothesis two it was determined that there is no difference between the personnel according to their gender since both have a correlation with the 3 dimensions of labor stress. In hypothesis three it was determined that there is no difference according to seniority in service since all 3 correlates with total exhaustion of personal fulfillment and total depersonalization. It would be extremely important to carry out future research in various fields of work.

ACKNOWLEDGEMENT

To the Psychometry Laboratory of the Center for Research, Innovation and Technology Transfer of the Catholic University of Cuenca (CIITT) and to the Nursing Career of the Catholic University of Cuenca, Azogues headquarters.

REFERENCES

- [1]. Blanco Guzmán M. Stress at work. *Revista ciencia y cultura*. 2003; 1 (12): 71-78.
- [2]. Villarreal Ramírez SM. Prevalence of obesity, associated chronic non-communicable diseases and their relation to stress, eating habits and physical activity in the workers of the Hospital de la Anexión. *Revistas de Ciencias Administrativas y Financieras de la Seguridad Social*. 2003;11(1): 83-96.
- [3]. Blanco-Álvarez T, Thoen M. Factors associated with job stress in Costa Rican prison police. *Revista Costarricense de Psicología*. 2017;36(1): 45-59.
- [4]. Valero C, Quiroz C. Stress-Fatigue Relationship: A Study in the Workplace. *Revista Electrónica de Psicología Iztacala*. 2019;22(2): 42.
- [5]. Naranjo DL. Occupational stress and its psychosocial risk factors. *CES Public Health Magazine*. 2011;2(1):80-84.
- [6]. Gómez P, Hernández J, Méndez Campos MD. Psychosocial risk factors and job satisfaction in a Chilean mining company. *Science and work*. 2014;16(49):9-16.
- [7]. Minchala R, Estrella M, Ramírez AA, Gualpa M, Abad N. Satisfaction level among inpatients and night nurses. *Revista Mapa*. 2019;3(15).
- [8]. Alvarez C, Romero M, Prieto A. Epidemiological assessment of noise exposure in local police and firefighters. *Revista de la Asociación Española de Especialistas en Medicina del Trabajo*. 2016;25(2): 86-95.
- [9]. Casenave CP. The demands and emotional burden of police work: police intervention in disasters and mass emergencies. *Psicopatología Clínica Legal y Forense*. 2009; 9(1):171-196.
- [10]. APA. *American Psychological Association Publication Style Manual*. México: Manual Moderno; 2002.

- [11]. Álvarez C, Torres J, Martínez CM. Study of burnout syndrome in Spanish paediatric surgeons. *Cir pediatr.* 2002;15(1): 73-80.
- [12]. Montealegre MC, Velandia JH. Contribution of occupational risk prevention management systems to occupational health and safety management. *Movimiento científico.* 2012;6(1):158-174.
- [13]. Chacón M, Grau J, Lence J. Psychosocial risk factors in oncology hospital care professionals and level of occupational stress. *Revista Waxapa.* 2019; 6(11):1-12.
- [14]. Ramírez A, Radillo B, Campos A. Occupational stress and its relationship to socio-occupational factors in public and private school teachers. *Revista Cubana de Salud y Trabajo.* 2019;20(1):52-57.
- [15]. Herrera F, Niño R, Montenegro C, Gaona P, FabRigo: Computer model for monitoring and controlling active break routines in office workers using the model: PoseNet. *Revista Ibérica de Sistemas e Tecnologías de Informação.* 2020; (E27): 273-285.
- [16]. Valero C, Quiroz C. Stress-Fatigue Relationship: A Study in the Workplace. *Revista Electrónica de Psicología Iztacala.* 2019;22(2).
- [17]. Lambert R, Boyle L, Fitchett P, McCarthy C. Risk for occupational stress among US kindergarten teachers. *Journal of Applied Developmental Psychology.* 2019; 61:13-20.
- [18]. Babanataj R, Mazdarani S, Hesamzadeh A, Gorji MH, Cherati JY. Resilience training: Effects on occupational stress and resilience of critical care nurses. *International journal of nursing practice.* 2019; 25(1).
- [19]. Fang Y, Huang CY, Hsu MC. Effectiveness of a physical activity program on weight, physical fitness, occupational stress, job satisfaction and quality of life of overweight employees in high-tech industries: a randomized controlled study. *International Journal of Occupational Safety and Ergonomics.* 2019;25(4):621-629.
- [20]. Fernández Zevallos AJ. Effectiveness of a program of active breaks to reduce the level of work stress among administrative staff at the Hipólito Unanue National Hospital; 2019.
- [21]. Bustos MA. Socio-labour factors related to occupational stress in operating room personnel. Goyeneche Hospital in Arequipa;2018.
- [22]. Flores LS, Ortega BZ, Rojas RA, Ortega AS, Zamora PG. Knowledge and exposure to occupational hazards of health personnel in the surgical area. *Revista Colombiana de Salud Ocupacional.* 2018;7(1):16-21.
- [23]. Aguilar M. Stress and its influence on quality of life. *MULTIMED.* 2018;21(6).
- [24]. St-Onge N, Samani A, Madeleine P. Integration of active pauses and pattern of muscular activity during computer work. *Ergonomics.* 2017;60(9):1228-1239.
- [25]. Tkacukova T, Oxburgh GE. Patterns of Cooperation between Police Interviewers with Suspected Sex Offenders. *The Discourse of Police Interviews.* 2020; 136.
- [26]. Espinosa AA, Rojas AI, Silva ML. Pause as a Factor of Change Associated with Healthy Lifestyle, in Students of the Tenth Semester of Medicine in the Industrial University of Santander (UIS) Bucaramanga-Colombia. *Revista Internacional de Humanidades Médicas.* 2019;7(2):75-81.
- [27]. Alcázar MA, Jiménez Y, Lobo D. Level of physical activity in workers of a land transport company in the city of Barranquilla; 2016.
- [28]. Duque VP. *Active breaks as a strategy for fatigue control (Bachelor's thesis, Quito: UCE);* 2015.
- [29]. Vargas B. *Preparation of a manual for the prevention of ergonomic risks in logistics offices (Doctoral dissertation, University of Guayaquil. Faculty of Industrial Engineering. Career of Industrial Engineering);*2019.
- [30]. Ortiz Medrano MA. *The Active Breaks and the Working Climate in the workshops of the decentralized municipal autonomous government of Pastaza (Bachelor's thesis, Technical University of Ambato. Faculty of Human Sciences and Education. Degree in Industrial Psychology);*2016.
- [31]. Peiró JM, Salvador A. *Workplace stress triggers (Vol. 2).* Madrid: Eudema; 1993.
- [32]. Pontón D. *Community policing and institutional change in Ecuador.* Flacso-Sede Ecuador; 2009.
- [33]. Bejarano YR, Gómez MA, Ariza CA, Prieto BL, Espinosa NM. Health status of a sample of police officers and their relationship to police variables. *Diversitas: Perspectivas en Psicología.* 2012;8(1):53-71.
- [34]. Morales M, Franco L. Health, anger and coping strategies in police officers. *EduPsykhé: Revista de psicología y psicopedagogía.* 2010;9(1):43-60.
- [35]. Dávila FA, Nevado N. Validation of Burnout screening inventory in health area training personnel. *Educación Médica.* 2016;17(4):158-163.
- [36]. Manso-Pinto JF. Factorial structure of the maslach burnout inventory-version human services survey in Chile. *Interamerican Journal of Psychology.* 2006;40(1):115-118.
- [37]. Serón P, Muñoz S, Lanás F. Level of physical activity measured by the international physical activity questionnaire in the Chilean population. *Revista médica de Chile.* 2010; 138(10): 1232-1239.
- [38]. Barrera R. International Physical Activity Questionnaire (IPAQ) Journal of Occupational Nursing. 2017;7(2):49-54.
- [39]. Constante WA. *General physical qualities that affect the development of physical performance of police officers aged 20 to 35 years of the Police Command of Sub-zone Imbabura No 10 in the period 2012-2013 (Bachelor's thesis);*2014.
- [40]. Liz CM, Cirimbelli L, Arab C, Silveira M, Brandt R, Itibere Cunha D, Andrade A. Occupational and socio-demographic characteristics related to the perception of stress in military police. *Revista Cubana de Medicina Militar.* 2014;43(4): 467-480.

- [41]. Díaz J, Tinoco V. Work stress levels in employees of a civil police institution in the city of Santa Marta. *Duazary*. 2011;8(1):6-12.
- [42]. Camerino A, Gestoso CG, Sevilla SS, Collantes MS, Vera BS, Pino MS. Workplace stress: prevalence in a local corporation. *Revista de la Sociedad Española de Medicina y Seguridad del Trabajo*. 2010; 5(4): 194-201.
- [43]. Sánchez-Nieto JM. Burnout frequency in Mexico City police. *Liberabit*. 2012;18(1):69-74.
- [44]. Rincón Leyva MH. The organizational climate and its relationship to job satisfaction in the company certifications in Peru; 2014.
- [45]. Leiva Moreno JA. Sense of life and aggressiveness in students from educational institutions in the Los Olivos District; 2016.
- [46]. Galanakis M, Alexandri E, Kika K, Lelekanou X, Papantonopoulou M, Stougiannou D, Tzani M. What Is the Source of Occupational Stress and Burnout? *Psychology*. 2020;11(05):647.
- [47]. Mehrdad R. Introduction to Occupational Health Hazards. *Int J Occup Environ Med (The IJOEM)*. 2020;11(1).