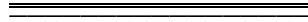


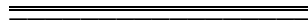
**The Bill Blackwood  
Law Enforcement Management Institute of Texas**



**State Mandated Health Education for Police Officers**



**An Administrative Research Paper  
Submitted in Partial Fulfillment  
Required for Graduation from the  
Leadership Command College**



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## **ABSTRACT**

The purpose of this research is to provide factual information and options to law enforcement officers about the benefits of exercise and nutrition to effectively reduce health risks and improve the overall quality of one's life. The issue to be examined considers whether or not a state mandated health education curriculum should be developed and implemented to address the serious health and wellness concerns of police officers. The instrument that will be used to measure the researcher's findings includes a questionnaire survey distributed to (23) law enforcement managers across the State of Texas. According to the American Heart Association (2004), cardiovascular disease was the number one killer in America and approximately 871,000 adults in the United States died of cardiovascular disease, which accounts for about 36% of all deaths. As an occupational group, law enforcement officers have a poor health profile and lead the nation in heart disease, cancer, diabetes, and suicide. Practical and scientific studies agree that proper exercise and nutrition can significantly decrease and eliminate the risks of serious diseases.

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## INTRODUCTION

Police officers are at a higher risk than the general population for developing heart disease, diabetes, cancer and other related illnesses. This is mainly the result of police duties, poor nutrition and inadequate physical activity. The law enforcement profession by its very nature is a highly stressful and a dangerous occupation. Police work can be a highly sedentary occupation as well. In addition, erratic sleep schedules as well as poor nutritional habits provide for an unhealthy life style. Many police officers are unaware of the serious health consequences of poor nutrition and limited physical activity until confronted with serious health events of their own. The issue to be examined considers whether or not a state mandated health education curriculum should be developed and implemented to address the serious health and wellness concerns of police officers.

The relevance of state mandated health education is to provide factual information and options to law enforcement officers about the benefits of exercise and nutrition, which can effectively reduce health risk and improve overall quality of life. A class survey of Law Enforcement Supervisors attending Bill Blackwood Law Enforcement Management Institute in Denton, Texas asked the question, "Name (3) things you desire in the world?" The majority of supervisors indicated life span improvement and good health were most desired.

The purpose of this research is to propose a method to educate police officers about proper exercise and nutrition to decrease health risks. State Legislation currently requires a Texas Peace Officer to receive (40) hours of training and education every (48) months. The Texas Commission on Law Enforcement Officer Standards &

Education (T.C.L.E.O.S.E) is the agency responsible for developing and implementing this curriculum. The commission currently requires (20) hours of this training to be specific topics. The researcher suggests (T.C.L.E.O.S.E) mandate health and wellness education as part of every peace officer's mandatory training curriculum.

The research question to be examined focuses on whether or not a state mandated health education curriculum would benefit police officers by decreasing mortality rates as well as other health related issues. Secondly, what should be included in a state mandated health curriculum for police officers? The intended method of inquiry includes: a review of articles, internet sites, journals, lectures and a survey distributed to law enforcement officers across the state. In addition, the researcher will conduct personal interviews with physicians, nutritionists, and personal fitness trainers.

The anticipated findings of the research should suggest mandatory health education will improve police officers' awareness of increased health risks and provide information for decreasing and even eliminating these risks. Officers can apply the education and make healthy decisions regarding regular checkups, eating habits and exercise. This research will benefit the law enforcement community by providing a framework for which a health education program can be launched statewide. Law enforcement officers could expect improved physical and emotional health. In addition, reduced health care cost, absenteeism, workers compensation, and civil liabilities claims. Police officers will benefit both professionally and personally by being exposed on a regular basis to the importance of health and wellness in their daily lives.

## REVIEW OF LITERATURE

The researcher discovered similar studies reporting police officers are at an increased risk of health problems and mortality rates. Police officers are at a higher risk than the general public to acquire incidents of heart disease and cancers (Reviere & Young, 1994). Dr. George Liepa, PH.D. reported in a (L.E.M.I.T) lecture in Denton, Texas, (2007) police officers lead the nation in heart disease, cancer, diabetes and suicide (Violanti, Vena, & Marshall, 1986). A study of ischemic heart disease (I.H.D.) mortality of Connecticut fireman and policeman was conducted examining death certificates for the years 1960 -1978. Mortality ratios suggest higher incidents of (I.H.D.) for Connecticut firemen and police when compared to other workers, yet mortality for police were found to be greater than the firemen (Sardinas, Miller, & Hansen, 1986).

In 2004, cardiovascular disease was the number one killer in America. Approximately 871,000 adults in the United States died of cardiovascular disease, which accounts for about 36% of all deaths (American Heart Association). Coronary Heart Disease is a condition in which damage is done to the heart muscle through obstruction of blood flow that can be induced by lesion formation, blood clotting and blood vessel constriction. The causes of lesion formation include high blood pressure, smoking, bacterial migration, abnormal serum homocysteine, oxidation, and abnormal cholesterol metabolism. The heart pumps blood to every tissue in the body through a 60,000-mile network of blood vessels. Blood supplies tissues with oxygen and nutrients that are essential for good health and arteries supply blood to the heart muscle (coronary arteries). A heart attack occurs when arteries supplying the heart with blood and oxygen become blocked. Coronary artery problems cause heart attacks, which

cause the deaths of 500,000 Americans annually (Mayo Clinic). The American Heart Association reports nearly one in three adults has high blood pressure, but because there are no symptoms, nearly one-third of these people don't know they have it. Uncontrolled high blood pressure can lead to stroke, heart attack, heart failure, kidney failure. High blood pressure is referred to as the "silent killer".

In 2003, The Center for Disease Control and Prevention identified cancer as the second deadliest disease in the United States, responsible for 556,902 deaths which accounts for 22.7% of all deaths. Cancer is a large group of diseases characterized by uncontrolled growth and spread of abnormal cells. Cancerous transformation occurs all of the time; however, in healthy people the immune system kills these cells as fast as they appear (Liepa, 2006). The United States has increasing trends in the following cancers: lung, liver, kidney, colon, and lymphoma.

In 2004, the American Heart Association reported diabetes killed 72,815 Americans, and another 15.2 million were diagnosed. Diabetes is a disorder of the metabolic system, which is the way bodies use digested food for energy and growth. Normally, the digestive system converts a portion of the food eaten into sugar called glucose. Sugar then enters the bloodstream, ready to fuel cells. Diabetes increases a person's risk for heart disease, stroke, and is associated with cardiovascular risks, such as high blood pressure, cholesterol disorders, obesity and insulin resistance. High blood pressure can also create additional problems for other organs, such as kidney damage.

The Mayo Clinic reports stroke as the third-leading cause of death and the leading cause of adult disability. Every year about 730,000 Americans experience a

stroke of which 158,000 will die. A stroke occurs every minute in the United States (Kirshner, 2003). A stroke is a “brain attack”. The brain uses about 25 percent of a body’s oxygen and nutrients. There must always be a constant flow of oxygen and nutrients because the brain can not store them. About 80% of strokes are caused by cholesterol containing fatty deposits called plaques. These fatty deposits build up and cause poor circulation.

Medical research has identified common factors that enhance a person’s risk of developing these life restricting and too often deadly diseases. High blood cholesterol, cigarette smoking, high blood pressure, obesity and stress are some of the major threats for increasing these diseases. Stress is something that most police officers know well and experience often. Positive experience of stress may include a promotion, vacation, marriage or having a child. Shift changes, poor economic benefits, frequent exposure to life’s miseries and dangers of the job are some examples of negative events that cause stress. Severe stress causes a physical response which includes a faster heart beat, quicker breathing and rising blood pressure. In addition, a body’s blood sugar rises and increases in blood flow to your brain and large muscles.

The American Heart Association and The Cooper Institute agree that through proper nutrition and regular exercise a person can reduce and often prevent the risk of serious health problems. According to a report from the American Cancer Society, at least half of all deaths from cancer in the United States could be prevented by healthier lifestyles and better use of screening tests. Stroke is one of the most preventable serious medical illnesses. Primary stroke prevention includes a healthy diet, exercise, smoking cessation, limited alcohol use and avoidance of stress (Kirshner, 2003).



Regular physical activity and exercise are important components in the prevention of diabetes. Exercise lowers blood glucose, improves insulin action, contributes to weight loss, and reduces several risk factors for cardiovascular disease (Castaneda, 2003).

The Mayo Clinic and The United States Department of Agriculture suggest 30 minutes of exercise most days can reduce heart disease, high blood pressure, stroke, diabetes and certain cancers. The benefit of exercise will strengthen the heart's ability to pump blood with less effort which will cause blood fat levels to improve, which benefits the cholesterol and triglycerides levels. Exercise helps maintain a healthy blood pressure level, lowers blood sugar and body fat, relieves stress and improves your overall sense of well being.

The Cooper Institute describes exercise as aerobic ("to exercise with oxygen") and anaerobic ("to exercise without oxygen"). Aerobic exercise occurs when you move large muscle groups such as your leg muscles. This exercise places increased demands on the heart, lungs, and muscle cells. Exercise in a good aerobic range: you should be breaking a sweat and breathing faster but still able to exercise comfortably for 30 to 60 minutes. Walking, biking, jogging and swimming are familiar aerobic exercises.

Anaerobic exercise occurs when the demands made on a muscle are great enough that it uses up all the available oxygen and starts to burn stored energy without oxygen. Burning energy produces lactic acid, which causes pain as it builds up in muscles. Lifting weight and sprinting are common anaerobic exercise. Anaerobic builds strength and speed rather than endurance. Balance and stretching activities enhances physical stability and flexibility, which reduces risk of injuries and stress. These activities can include gentle stretching, dancing, yoga and martial arts (M.

Reeves, lecture, January 28, 2007). A proper exercise program should include aerobic, anaerobic, balance and stretching exercises.

High blood pressure affects more than 50 million Americans and is a major cause of heart disease, stroke, heart failure and kidney failure. The “Dietary Approaches to Stop Hypertension” (DASH), a research where participants ate a diet low in fats and high in fruits, vegetables, and low fat dairy products proved to be an effective way to prevent and control high blood pressure. Additionally if all Americans followed the (DASH) diet, reductions in blood pressure, heart disease and stroke would likely be reduced by 15% and 27% respectfully. This translates into 225,000 fewer heart attacks and 100,000 fewer strokes every year. The plan may be as effective for preventing breast, colon, and prostate cancers (Svetkey & Karanja, 1998).

The American Heart Association advises a healthy diet and lifestyle are the best weapons you have to fight cardiovascular disease. The United States Department of Agriculture recommends a balanced diet of grains, fruit, vegetables, milk, meat and beans. This is commonly referred to as “My Pyramid”. Vegetables and fruits are high in vitamins, minerals, fiber and are low in calories. Eating a variety of fruits and vegetables may help you control your weight and blood pressure. Whole grain foods contain fiber that can help lower blood cholesterol and help you feel full, which may help manage weight. Research indicates eating fish containing omega-3 fatty acids twice a week lowers risk of death from coronary artery disease.

Water is ultimately the most important nutrient. Positive effects of good hydration are shown for constipation, exercise asthma, hyperglycemia in diabetic, urinary tract infections, hypertension, and heart disease (Manz & Wentx, 2005). Every body cell,

tissue, and organ needs water to function. Water transports nutrients, carries away waste, ensures adequate blood volume, forms main component of body fluids, protects against heat exhaustion, insulates in the cold and carries medicines to the proper places in the body. The recommended water consumption per day is based on a person's weight, although the average is approximately 80 to 96 ounces (J. Kudlac, personal communication, February 1, 2007).

The Federal Bureau of Investigation National Academy provides training to law enforcement leaders across the world. The Physical Training Unit at Quantico manages the Bureau's Fitness and Defensive Tactics programs. Courses in nutrition and fitness are taught by Nutrition Advisors, National Academy Fitness advisors and FBI Fitness Instructors. The Bill Blackwood Law Enforcement Management Institute in Texas has a similar curriculum where law enforcement executives around the nation are involved in a (3) week program that focuses on health and wellness. Finally, The Cooper Institute in Dallas, Texas has a physical fitness test, standards and a program specifically modified for law enforcement officers.

## **METHODOLOGY**

The research question to be examined focuses on whether or not a state mandated health education curriculum would benefit police officers by decreasing mortality rates as well as other health related issues. Secondly, what should be included in a state mandated health curriculum for police officers? The researcher believes mandated health education is necessary and will improve police officers' health and decrease mortality rates. The health curriculum should include factual information regarding job related health risks and the benefits of proper exercise and nutrition. This

research is not providing a detailed exercise and nutrition program, although a successful curriculum should have a detailed exercise and nutrition program which is simple to understand and implement.

The method of inquiry includes a review of articles, internet sites, journals, and books examining health and wellness. The researcher attended lectures and conducted personal interviews with physicians, nutritionists, and personal fitness trainers regarding the benefits of nutrition and exercise for police officers. The instrument that will be used to measure the researcher's findings regarding the subject of state mandatory health education for police officers will include a questionnaire survey. The size of the survey will consist of (11) questions, distributed to (23) law enforcement managers from across the State of Texas. The managers were attending training at Texas Woman's University regarding the social, legal and political environment of law enforcement executives in the 21<sup>st</sup> century. The police departments represented ranged from large cities, metropolitan areas and small departments from rural areas. The response rate to the survey instrument resulted in (20) complete and (3) questionnaires not returned. The information obtained from the survey will be analyzed by the researcher and the data will be used to support or disprove the hypothesis.

## **FINDINGS**

As an occupational group, law enforcement officers have a poor health profile. A significant amount of statistical data indicates law enforcement officers have increased risks for developing serious life threatening diseases and stress related disorders. These are the consequences of poor nutrition, inadequate exercise, and police related duties. Research indicates regular physical exercise and proper diet reduces the risk of

serious health problems. The findings indicate law enforcement officers are at increased risk of serious health problems.

The researcher believes Americans and police officers must not be totally aware of these health risks and diseases. The statistics and mortality rates are incredibly high and alarming. Are police officers and Americans not concerned with safety? The researcher does not believe this to be the case. A majority of Americans protect themselves by locking their homes at night and wearing seatbelts while driving. Police officers receive numerous training hours in self defense, firearm proficiency and most even wear ballistic vests. The research indicates 1,230,717 Americans die each year from heart disease, cancer, diabetes, and stroke. These numbers are increasing every year.

The first tier to solve this problem must be awareness. Police officers across the state must first receive the facts about the health risks and a solution to reduce and eliminate these dangers. A survey of (23) police supervisors were asked, "Would health risk awareness and proper nutrition and exercise benefit your department and employees (see figure 1)?"

### Is Health Awareness and Nutrition Beneficial?

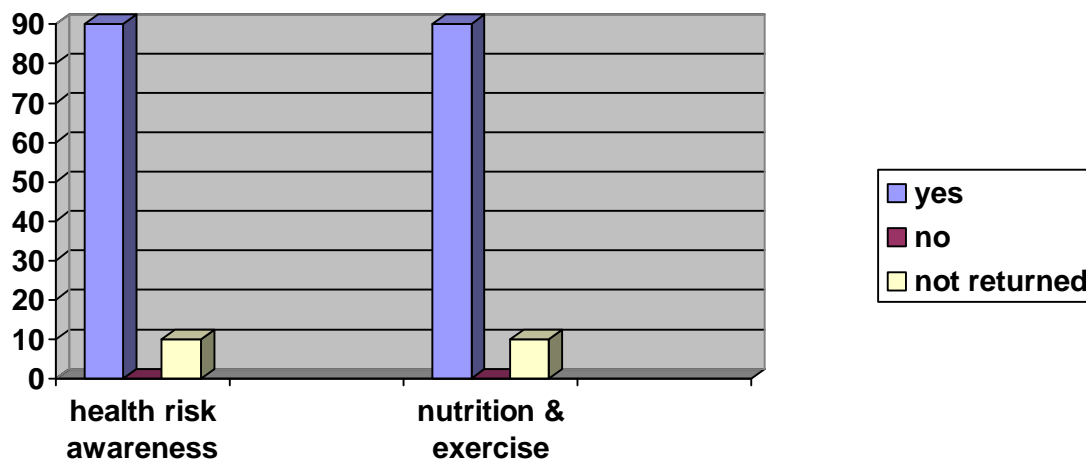


Figure 1.

The survey inquired how important is good overall health to perform your duties efficiently as a police officer (see Figure 2).

### Importance of Overall Health



Figure 2.

The supervisors unanimously agree police departments and employees would benefit from health risk awareness, proper nutrition and exercise education. Furthermore, 17 out of 20 police supervisors consider good health very important to perform their duties efficiently. Physical health enables a police officer to use their body in activities requiring strength, muscular endurance, cardiovascular endurance, flexibility,

coordination, agility, power, balance, speed, and accuracy without unnecessary experience of fatigue and exhaustion. Genuine health and wellness is not just the absence of disease or illness, it is a state of well-being. Total well-being translates into positive lifestyles behaviors and good health habits. Exercise and proper nutrition make up the foundation for significant health supported with sleep, rest, hydration, flexibility and regular check-ups. The benefits of exercise and nutrition effects physical health by decreasing blood pressure, increasing energy and metabolism, improving cardiovascular health and cholesterol ratio, improving longevity, flexibility and reducing body fat. Emotionally, exercise and nutrition improves self-image, decreases anxiety and depression, improves sleep, and assists in dealing with stress with high incidence of stress related disorder including, alcoholism, divorce, and suicide. Proper exercise and nutrition affects a police officer's job performance by reducing health care cost, reducing sick time, increasing alertness and productivity.

## **CONCLUSIONS**

The issue examined by the researcher considered whether or not a state mandated health education curriculum should be developed and implemented to address the serious health and wellness concerns of police. The research confirms alarming statistics regarding health problems that lead to the decline of the quality of life for police officers. Many police officers have sworn to protect the weak and innocent, ironically officers find themselves worn out physically and mentally at the conclusion of their career. The purpose of this research is to provide factual information and options to law enforcement officers about the benefits of exercise and nutrition to effectively reduce health risk. The researcher shares the same profession and is dedicated to the

preservation of life and the pursuit of happiness. The intention of the researcher is to suggest a means to deliver vital information to a group of professionals across the state in an effort to save lives and improve the quality of their lives.

The research question that was examined focused on the possibility that state mandated health education would benefit police officers by decreasing mortality rates as well as other health related issues, and what should be included in this program. Most importantly, a mandatory health education across Texas assures every peace officer will have the information to protect themselves from serious life threatening diseases. The program should include information about the most common life threatening diseases and simple exercise and nutrition programs. The researcher hypothesized that mandatory health education will improve police officers' awareness of increased health risks and provide information for decreasing and eliminating these risks.

The researcher concluded from the findings that health awareness and education significantly impacts police officer's emotional and physical wellness in a positive manner. The findings of the research did support the hypothesis. The reason why the findings did support the hypothesis are most likely due to scientific and practical research which indicates proper exercise and nutrition programs do decrease most serious diseases and illnesses. The benefits of a proper fitness program in combination with a well balanced diet decreases blood pressure, improves sleep, increases energy, improves cardiovascular health, improves cholesterol ratio, reduces body fat, increases longevity and improves flexibility. Limitations that might have hindered this study resulted because part of the issue to be examined is based on the belief that most



police officers are unaware of work related health risk. The researcher was unable to confirm if officers refuse to take precautions about their health or if they lack the knowledge.

The study of state mandated health education is relevant to contemporary law enforcement because officers across the state will have a program teaching and encouraging good personal habits in an effort to attain a higher degree of wellness. Exercise and nutrition significantly increase physical health, reduce mortality rates and injuries, and improves emotional health. Law enforcement agencies and communities stand to benefit by the results of this research. Fitness relates to the ability of officers to perform essential functions of the job, minimize the risk of excessive force situations, meets many legal requirements to avoid litigation, and minimizes the known health risks associated with public safety.

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