PHYSICAL ACTIVITY LEVELS AS A QUANTIFIER IN POLICE OFFICERS AND CADETS

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Abstract

Objectives: The aim of the present study was to determine the physical activity levels of active duty police officers and police academy cadets in different life domains and intensities. These parameters were treated as potential quantifiers that could be used when assessing individuals preparing for work as future police officers. Material and Methods: The study recruited 153 active police officers and 176 cadets attending a police academy and administered a diagnostic survey, the long-form version of the International Physical Activity Questionnaire, while in the statistical analysis the Student’s t-test for independent groups was applied. Results: It was determined that police officers present high physical activity levels within the work domain, which are developed from initial training at a police academy and then throughout their police career. Conclusions: Such data are important in the light of the role police officers play in public safety as well as the prominence of physical activity within a particular profession and how it can be targeted and tailored to their needs.

Key words: Physical activity, Motives, Barriers, IPAQ, Police, Cadets

INTRODUCTION

Physical activity is defined as any bodily movement where energy is expended, which can be performed either as a form of physical labor or for pleasure [1]. Many studies have concluded that low levels of physical activity, as had been initially suspected, are a major risk factor for many diseases [2]. Physical activity accounting for less than 10% of the total daily energy expenditure is considered insufficient for maintaining good health [3,4]. In addition, at least 25 min of physical activity per day are needed to meet the currently accepted recommendations [5].

The specific nature of the emergency services requires its employees to not only be healthy and psychologically strong, but also physically fit. Police officers, firefighters, and soldiers are all exposed to significant amounts of psychophysical stress, hence physical fitness plays a significant role during training and throughout their career. A high level of physical activity is essential not only for maintaining good health, but also to allow individuals to effectively perform their jobs [6].

In particular, the nature of police work carries with it a number of increased risks that fall outside those present in the line of duty, such as a higher prevalence of colon cancer, diabetes, cardiovascular disease, and arthritis. A higher incidence of these diseases was found among police officers when they were compared with the local population they serve in [7]. Some of the factors responsible for these health problems include mental exhaustion, poor and irregular sleep habits, and an unhealthy diet [8].
However, studies point out that such negative health effects can be neutralized by increased physical activity, especially through endurance and strength training [7], confirming the earlier findings that a high level of physical activity is effective in reducing the incidence of non-communicable diseases and lowering the mortality rate of a population [9,10]. Therefore, of considerable importance in recruiting potential police candidates is selecting individuals who are able to meet criteria that can determine best the peak physical fitness, such as those linked to high levels of physical activity and strength abilities. Although the candidates that end up attending police academies differ in terms of their morphological features [11,12], it has been found that, due to the specificity of the physical activity that is required of them in the uniformed services, they undergo similar changes in their somatic and tissue characteristics.

The purpose of this study was to determine the prevalence of physical activity of active police officers and police academy cadets by determining their overall involvement in physical activity, its intensity, as well as the domains in which it is most commonly performed, such as during work or as a form of sport or recreation. These factors were treated as potential indicators of how well police officers prepare themselves for their job. The analysis of these 2 groups, i.e. active duty police officers and cadets attending police school, was also used to determine how a career as a professional police officer influences physical activity levels over time.

**MATERIAL AND METHODS**

A representative sample of police officers was recruited for this study by means of stratified sampling. Five district police stations from the city of Warszawa, Poland were randomly selected, out of which 154 active-duty patrol and emergency response police officers were randomly chosen for inclusion. As for those training to become police officers, cadets participating in a half-year course at the Police Training Center in Legionowo, Poland were selected for participation. This sample was selected based on the cadets’ availability during the study period and accounted for 78.5% of all attending cadets, or 176 individuals. All of the participants were males.

The morphological characteristics and age of the participants were recorded, and they revealed significant differences in the mean age of the 2 groups, which seems logical in the light of the fact that active duty police officers are individuals who already have a few years of professional experience, while police academy cadets are typically young individuals only entering their professional career. Among the group of police officers, a high standard deviation of the mean age was found, which points to a significant variation among this group. Also of interest were the relatively high mean body mass index (BMI) values of both police officers and cadets, which, based on the norms defined by Garrow [13], classified them as overweight (Table 1).

The participants’ physical activity levels were assessed by the use of a diagnostic survey, the long-form version of the International Physical Activity Questionnaire (IPAQ). It was developed to monitor and measure 4 life domains in which physical activity is performed: occupational, transportation-related, household tasks-related, and recreational activity or sport [14]. The form asks respondents to report their physical activity in each domain based on its intensity (intensive, moderate, or walking), duration, and frequency. The collected data are then weighted by a metabolic equivalent (MET), resulting in a physical activity estimate that provides the total energy expenditure in METs [15]. The equivalent of 1 MET is the amount of O₂ consumed at rest, or 3.5 ml O₂/kg of the body mass per min [16]. This questionnaire is one of the most proven and widely used methods for determining physical activity levels of different social groups [17,18].

The collected data were then subjected to a statistical analysis with the help of Statistica 8.1 PL software, with standard deviations and arithmetic means calculated. Variables that met the requirements for the Student’s