

SHORT COMMUNICATION

Development of a standardized physical activity and sport monitoring system for the European Union

Lea Nash¹, Paulo Rocha², Stephen Whiting³

¹ Division of Noncommunicable Diseases and Health Promotion, WHO Regional Office for Europe, Copenhagen, Denmark

² Portuguese Institute for Youth and Sport, Lisbon, Portugal

³ Division of Noncommunicable Diseases and Promoting Health through the Life-Course, World Health Organization European Office for Prevention and Control of Noncommunicable Diseases, Moscow, Russian Federation

Corresponding author: Stephen Whiting (email: whitings@who.int)

ABSTRACT

Physical inactivity is a main risk factor for a number of noncommunicable diseases, accounting for a large proportion of premature mortality, disability-adjusted life-years and significant loss of productivity. The prevalence of physical inactivity is increasing, and it is estimated that more than half the population in the European Union do not meet the WHO recommended levels of physical activity for health and well-being.

The successful promotion of physical activity and sport requires reliable data to enable the implementation and evaluation of appropriate and cost-effective

policies. At the European Union level, it is crucial that data is comparable across Member States to identify and share effective policies. As countries use different methods to measure physical activity, sedentary behaviour and sport participation, attempting to compare data across Member States is an enormous challenge. In response to this, the European Union Physical Activity and Sport Monitoring System (EUPASMOS) was initiated to develop a standardized European Union-wide surveillance system.

Keywords: PHYSICAL ACTIVITY, MONITORING, SURVEILLANCE, SPORT, SEDENTARY BEHAVIOUR

INTRODUCTION

According to WHO, physical inactivity is one of the leading risk factors for health, accounting for around 8.3 million disability-adjusted life-years globally (1). WHO's global recommendations for physical activity for health define physically inactive people as those not reaching a specific level of physical activity to protect their health (2). They recommend that adults aged 18–64 years engage in at least 150 minutes of moderate-intensity aerobic physical activity or 75 minutes of vigorous-intensity aerobic physical activity throughout the week, including participation in sports.

In the European Union, however, levels of physical inactivity and sedentary behaviour – generally defined as prolonged time spent sitting or lying down – are high. It is estimated that more than half of the adult population do not meet WHO's recommendations for physical activity (3). Aside from

inactivity-related diseases such as obesity, cardiovascular diseases, type 2 diabetes and some cancers, physical inactivity is estimated to contribute to one million premature deaths per year in the WHO European Region alone (4). In addition to the health impact, this has huge social and economic implications due to loss of productivity, absenteeism and the continuous increase in direct and indirect health care costs (5).

Despite increasing awareness of the importance of physical activity and sport in European societies, the proportion of citizens who reach the recommended physical activity levels is decreasing (3). It is therefore particularly relevant to find appropriate solutions to tackle this problem.

The successful promotion of physical activity and sport requires trustworthy and evidence-based guidance that enables the design, implementation and evaluation of impactful and cost-effective policies. Thus, valid, reliable and comparable data on the

prevalence of physical activity, sport participation and sedentary behaviour are essential to provide insights into inequalities between population groups within and across Member States, and to support adjusted policies to promote an increase in physical activity and sport participation levels, which in turn can increase social cohesion and boost economic growth (6).

Numerous actions have been taken to tackle the global epidemic of physical inactivity in the WHO European Region. One example is the publication of the Physical activity strategy for the WHO European Region 2016–2025, which aims to support Member States in facilitating and promoting all forms of regular physical activity throughout the life-course (7). A network of national physical activity focal points from each of the European Union (EU) Member States was also established in 2014 by the European Commission and WHO. Its aim is to collect relevant national information on physical activity, share lessons learned and best practices between countries and advocate implementation of health-enhancing physical activity (HEPA) policies (8). Based on data provided by this network, which led to the publication of WHO factsheets on HEPA in 2015 (9), it was clear that huge challenges exist in the way countries monitor physical activity and sport participation. This is due to the variety of methodologies and instruments used by EU Member States, including questionnaires – such as the International Physical Activity Questionnaire (IPAQ) (10), the Global Physical Activity Questionnaire (GPAQ) (11) and the European Health Interview Survey – Physical Activity Questionnaire (EHIS-PAQ) (12), as well as national surveys and objective physical activity measurement methods such as accelerometers. The data reported in national HEPA factsheets developed in 2015 differed considerably depending on the survey instruments used; some countries reported data from national questionnaires while others used standardized international instruments. In addition, some countries do not have an established monitoring mechanism in place. This makes proper comparison of levels of physical activity and sport participation among Member States unfeasible and limits the capacity of policy-makers to identify successful policies and advocate their adoption across the EU and beyond.

In response to this challenge, several EU Member States, with financial and political support from the European Commission and WHO Regional Office for Europe, initiated a project to develop a standardized surveillance system to monitor sedentary behaviour, physical activity and sport participation: the EU Physical Activity and Sport Monitoring System (EUPASMOS).

AIM AND OBJECTIVES OF EUPASMOS

EUPASMOS is a two-year project jointly funded by the European Commission through the Erasmus+ Sport grant for collaborative partnerships and participating Member States, running between January 2018 and December 2019. Currently, several EU Member States are actively participating in the project (Bulgaria, Cyprus, Denmark, Italy, Finland, France, Hungary, Latvia, Malta, the Netherlands, Poland, Portugal, Romania, Slovenia, Spain, Sweden and the United Kingdom (England)) and all the rest are still invited to join. The project is driven by a coordination team, led by Paulo Rocha from the Portuguese Institute of Sport and Youth, WHO's associate partner, with support from the WHO Regional Office for Europe.

The aim of EUPASMOS is to implement a harmonized monitoring system for physical activity, sedentary behaviour and sport participation, through the development of an integrated and shared methodological process that will provide comparable, valid and reliable physical activity and sport participation data across EU Member States. The outcomes of the project will support Member States, the European Commission, WHO and other relevant organizations in the design, promotion, implementation and surveillance of effective, evidence-based HEPA and sport policies and strategies across Europe.

As a means to reach the ambitious goal of the project, the objectives are to establish a monitoring framework for physical activity and sport participation; to compare commonly used physical activity questionnaires with each other and with objective accelerometer data; to gather, analyse and compare physical activity and sports data across EU Member States; and to develop a toolkit to build and reinforce capacity to monitor, analyse and compare physical activity and sport participation prevalence data, as well as sedentary behaviour patterns. In addition, relevant data collected will be shared globally through the WHO European Health Information Gateway.

METHODOLOGY

A protocol for measuring physical activity and sport participation has been created, which includes core and optional components. Such a protocol allows partners to adapt the methodology to their own capacity and resources while ensuring an integrated system. A national sample of 800–1000 adult and senior participants, including people with disabilities, will be identified for each project partner.

Participants will be selected through a convenience sampling with age groups represented.

Subjects will be requested to wear accelerometers for seven consecutive days and to respond to commonly used physical activity questionnaires – including the IPAQ, GPAQ and EHIS-PAQ – during the period. These questionnaires, including national questionnaires (when used) and the Eurobarometer (13), will then be validated against data collected from the accelerometers in the entire sample. In addition, the physical activity questionnaires used will be translated into all applicable languages (as needed) and an assessment of the validity of each questionnaire will be carried out among a subsample of 80 participants in each country. Finally, determinants of physical activity and sport participation will be studied using questionnaires adapted for this purpose.

ADDED VALUE

EUPASMOS builds on the successful collaboration between the European Commission, Member States and international sport stakeholders, including the Association For International Sport for All, EuropeActive, European Cycling Federation, European Platform for Sport Innovation, Federation of the European Sporting Goods Industry, Institute of Sport Science and Sport, International Sport and Culture Association, Robert Koch Institute and WHO. The project will reinforce collaboration between all EU Member States, the European Commission, WHO and other stakeholders as they work together to establish the first European framework for physical activity and sport surveillance.

EUPASMOS will create a novel, cost-effective methodology that will be available for use by all partners for collection of data on physical activity and sport participation, in line with the best knowledge available in this domain. In addition, Member States within and outside the EU will be able to use the project outputs, as a freely available toolkit will be developed to provide guidance and build capacity in countries so that they can adjust their surveillance systems to align with the established framework. The toolkit is a key output that will include a detailed protocol for monitoring physical activity and sport participation and will ensure that the project can be scaled up to include more countries throughout the EU and other regions.

While validation studies of physical activity measurement tools have been carried out in the past, this is the first time multiple instruments will be validated at the same time, using

objective data collected from nationally representative, aged-stratified samples across multiple EU Member States, including vulnerable groups such as seniors and people with disabilities. In addition, sport participation will also be measured thereby, increasing the range of collected data. To date, 17 countries are actively involved in the project. However, EUPASMOS intends to include all EU Member States. Therefore, other countries are encouraged to join the project and accelerate the progress towards a harmonized system for monitoring and surveillance of physical activity and sport.

Dissemination and communication of the results are key components of the project. The data collected will be integrated into the WHO European Health Information Gateway database, thereby making it readily available to all interested stakeholders.

All information developed by the project will also be published on the project's official website (14).

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