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**【Review Article】**

## Physical Activity and Health at the Population Level – the Role of International Networks

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**ABSTRACT** The first countries to develop comprehensive policy approaches to population based physical activity promotion in the modern sense were Finland and Canada. Other parts of the worlds saw comparable developments in countries or large metropolitan areas towards the end of the 20th century, examples are Australia, São Paulo in Brazil and Japan. The US Surgeon General’s report on Physical Activity and Health of 1996 was a health policy document with important international repercussions. Around the same time, the World Health Organisation (WHO) began to integrate physical activity in its Active Living Strategy and a little later in its Global Strategy for the Prevention and Control of Non-Communicable Diseases (NCDs). In 2004, physical activity featured more prominently in the WHO’s Global Strategy on Diet, Physical Activity and Health. In the 2008-2013 Action Plan to WHO’s NCD strategy, physical inactivity was for the first time explicitly and prominently named as one of the four main NCD risk factors. In 2010, WHO issued the first Global Recommendations for Physical Activity and Health, its role for global public health was confirmed in the 2011 UN High-Level Meeting on NCDs. So physical activity is a relatively new concept in international public health. Many institutions can play an important role in physical activity promotion, but for most this is only one of their tasks amongst others. There are a limited number of organisations that focus on physical activity and health alone: the international physical activity promotion networks and the International Society for Physical Activity and Health (ISPAH). Agita Mundo, the Global Physical Activity Promotion Network, the four existing regional networks (RAFA/PANA, HEPA Europe, APPAN and AFPAN), ISPAH and its advocacy council GAPA work together not only in the dissemination of tools and information, but also in lobbying for physical activity as an important aspect of public health.

### Physical activity and health – from the individual to the global level

The importance of physical activity for individual fitness and health has been long recognised and incorporated in proverbs analogous to “use it or lose it” in many languages. However, its importance at the population level has only begun to emerge over the last half century. There have been several social movements in society with a strong link to physical activity, for example the gymnastics movement in central and northern Europe since the middle of the 19th century, the annual Health and Sports Day

(Taiiku-no-Hi) as a national holiday in Japan in commemoration of the Tokyo Olympic Games in 1964 and the Sport for All movement with Congresses organised by the International Olympic Committee (IOC) since 1986. The first countries to develop comprehensive policy approaches to physical activity promotion were Canada<sup>1)</sup> and Finland<sup>2)</sup>, both in the 1970ies. In Brazil, the State of São Paulo became the setting for the “Agita São Paulo” movement in the late 1990ies<sup>3)</sup>. Examples for comprehensive developments in other world regions were Australia since 1996<sup>4)</sup>, Japan with its national strategy since 2000<sup>5)</sup> and South Africa with the development of a national physical activity plan since 2011<sup>6)</sup>. Though the US National Physical Activity plan was only launched in 2010, the scientific and conceptual work in the United States was very influential on the international level, from

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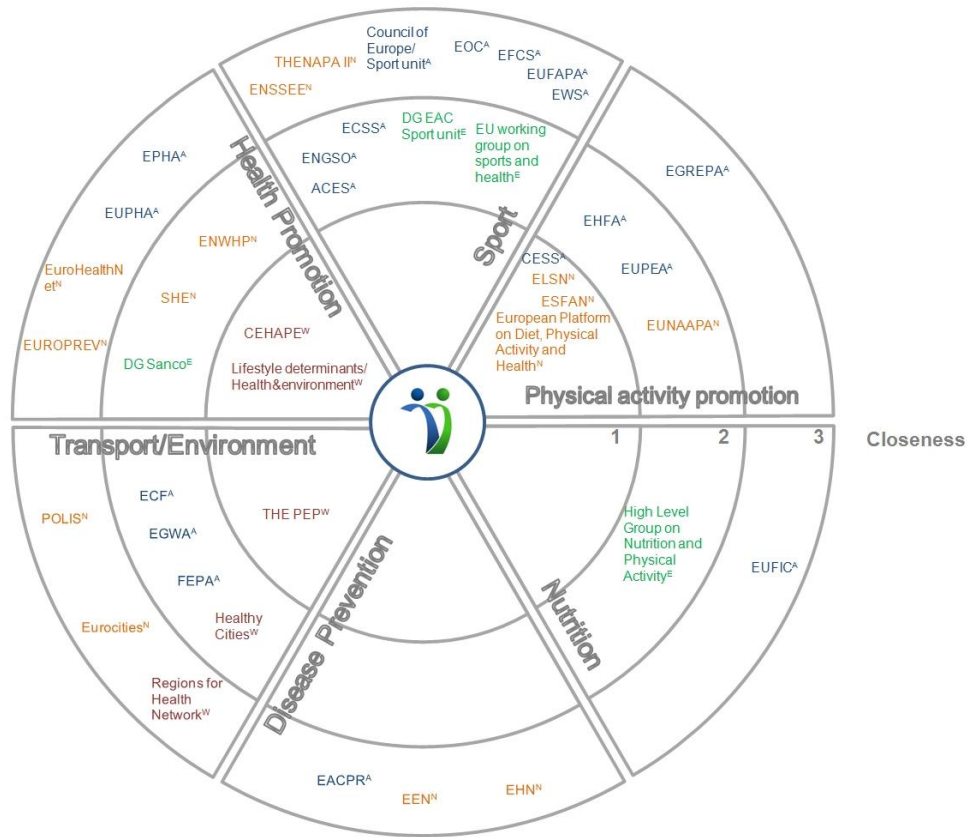
the Surgeon General's report on Physical Activity and Health in 1996<sup>7)</sup> to the Advisory Committee Report for the 2008 Physical Activity Guideline for Americans<sup>8)</sup>.

Physical activity in international health is a relatively new phenomenon. The World Health Organisation (WHO) presented the "Active Living" initiative at its 4th International Conference on Health Promotion in Jakarta in 1997 and physical activity was also an element in the Global Strategy for the Prevention and Control on Non-Communicable Diseases (NCDs) adopted by the World Health Assembly in 2000<sup>9)</sup>. Still there was little concrete action, until Physical Activity was chosen as the topic of WHO's World Health Day in 2002. The Global Strategy on Diet, Physical Activity and Health adopted by the World Health Assembly 2004<sup>10)</sup> was the first time physical activity entered the global central stage of public health. The strategy explicitly stated: "although the effects of diet and physical activity on health often interact, particularly in relation to obesity, there are additional health benefits to be gained from physical activity that are independent of nutrition and diet (...)". Nevertheless, at this time physical activity was still mainly perceived in the context of the obesity discussion. This began to change when the 2008-2013 Action Plan to WHO's NCD strategy prominently stated not only four main groups of NCDs (cardiovascular diseases, diabetes, cancers and chronic respiratory diseases), but also four main risk factors: tobacco use, physical inactivity, unhealthy diets and harmful use of alcohol<sup>11)</sup>. In WHO's 2009 "Global Health Risks" assessment, physical inactivity was ranked as the fourth risk factor for worldwide mortality<sup>12)</sup>, with four more of the six top factors also related to it (high blood pressure, high blood glucose, overweight and obesity, high cholesterol). In the following year, WHO issued the first Global Recommendations on Physical Activity for Health<sup>13)</sup>. This prominent role was confirmed in the first UN high level meeting for non-communicable diseases in autumn 2011 in New York and its political declaration adopted by the General Assembly of the United Nations<sup>14)</sup>. It seemed that now physical activity had found its rightful place in international public health.

## **International organisations relevant for physical activity and health**

From the perspective of public health, the World Health Organisation WHO as the "directing and coordinating authority for health within the United Nations system" ([www.who.int](http://www.who.int)) is the most important global organisation to include physical activity in its agenda. Other ones are the International Union for Health Promotion and Education ([www.iuhpe.org](http://www.iuhpe.org)) or the International Society for Behavioural Nutrition and Physical Activity (ISBNPA, [www.isbnpa.org](http://www.isbnpa.org)). However, beside health there are other parts of society which are of great relevance for physical activity and health, and also within these there are institutions very active in this topic. The International Olympic Committee (IOC, [www.olympic.org](http://www.olympic.org)) has already been mentioned in this context, other examples from the field of sports are the Association For International Sport for All (TAFISA, [www.tafisa.net](http://www.tafisa.net)) and the International Sport and Culture Association (ISCA, [www.isca-web.org](http://www.isca-web.org)). For physical education, the International Council of Sport Science and Physical Education (ICSSPE, [www.icsspe.org](http://www.icsspe.org)) could be mentioned. In addition there are a number of regional organisations with global impact in our field, including the American Society for Sports Medicine (ACSM, [www.acsm.org](http://www.acsm.org)), particularly with its Exercise is Medicine Initiative ([www.exerciseismedicine.org](http://www.exerciseismedicine.org)), the European College of Sports Sciences ([www.sprt-science.org](http://www.sprt-science.org)) or the Asian Council of Exercise and Sports Science ([www.acesc.asia](http://www.acesc.asia)). A systematic overview of institutions relevant for health-enhancing physical activity in the European region has been carried out recently (Figure 1)<sup>15)</sup>, but no such overview exists at the global level.

These institutions represent only an incomplete list of organisations relevant for health-enhancing physical activity and health at the global level, and there are far more of them at the regional and national level. However, all of them have in common that physical activity and health is only one of their institutional tasks and topics, and usually not the one with the highest priority. At the global level, there are only two organisations dealing exclusively with physical activity and health: Agita Mundo, the Global



**Figure 1** Overview of European institutions and their role for health-enhancing physical activity<sup>15)</sup>, by topic, type of organisation and synergy with the goals of HEPA Europe (=closeness). A: NGO or Association; N: network; E: European Commission body, W: WHO unit or platform<sup>15)</sup>. Health care organisations were not included in the analysis. No systematic overview on the role of global institutions exists yet.

ACES: European Capitals of Sport Association; CEHAPE: Children’s Environment and Health Action Plan; CESS: Confédération Européenne Sport et Santé; DG EAC: Directorate General Education and Culture; DG SANCO: Directorate General for Health and Consumers; EACPR: European Association for Cardiovascular Prevention & Rehabilitation; ECF: European Cyclists’ Federation; ECSS: European College of Sports Science; EEN: Epode European Network; EFCS: European Federation for Company Sports; EGREPA: European Group for Research into Elderly and Physical Activity; EGWA: European Greenways Association; EHFA: European Health and Fitness Association; EHN: European Heart Network; ELSN: Euro Local Sport Network; ENGSO: European Non-Governmental Sports Organisation; ENSSEE: European Network of Sport Science, Education and Employment; ENWHP: European Ne for Workplace Health Promotion; EOC: European Olympic Committee; EPHA: European Public Health Alliance; ESFAN: European Sport for All Network; EUFAPA: European Federation of Adapted Physical Activity; EUFIC: European Food Information Council; EUNAAPA: European Network for Action on Ageing and Physical Activity; EUPEA: European Physical Education Association; EUPHA: European Public Health Association; EUROPREV: European Network for Prevention and Health Promotion in Family Medicine & General Practice; EWS: European Women and Sport; FEPA: Federation of European Pedestrian Associations; POLIS: European Cities & Regions Networking for Innovative Transport Solutions; SHE: Schools for Health in Europe; THE PEP: Transport, Health and Environment Pan-European Programme; THENAPA II: Thematic Network Adapted Physical Activity.

Physical Activity Promotion Network, and the International Society for Physical Activity and Health (ISPAH). Agita Mundo was founded after the WHO's World Health Day celebration 2002 in São Paulo, building on the successful experiences of the Agita São Paulo and the Agita Brazil programmes<sup>16</sup>. Its members are the regional physical activity promotion networks as well as organisations and institutions willing to contribute to its purpose, which is to promote physical activity as a healthy behaviour for people of all ages, nations, and characteristics. ISPAH was founded after the successful first International Conference for Physical Activity and Public Health (ICPAPH) in Atlanta in 2006, ICPAPHs following every two years have seen further increases in participation. ISPAH is an international professional society for individual members who are interested in advancing the science and practice of physical activity and health. Many experts are involved in both ISPAH and Agita Mundo (see Tables 1 and 2), and there is strong collaboration between the physical activity networks, ISPAH and the Society's councils. Every second year the Agita Mundo Network meeting takes place in conjunction with ISPAH's biennial conference ICPAPH.

**Table 1** Executive Board of ISPAH ([www.ispah.org](http://www.ispah.org)), the International Society of Physical Activity and Health, as at early 2014.

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- Harold W. Kohl, III, University of Texas, USA (president)
  - Fiona Bull, University of Western Australia, Perth (president-elect)
  - Lars Bo Anderson, University of Southern Denmark, Odense
  - Adrian Bauman, University of Sydney, Australia
  - William E. Kraus, Duke University, Durham NC, USA
  - Shigeru Inoue, Tokyo Medical University, Japan
  - Vicki Lambert, University of Cape Town, South Africa
  - Michael Pratt, Centers for Disease Control and Prevention CDC, USA
  - Jasem Ramadan, Kuwait University
  - Olga Sarmiento, Universidad de los Andes, Bogotá, Colombia
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## The international physical activity networks

The main members of Agita Mundo are the regional physical activity promotion networks which are also represented in its Executive Board (see Table 2). The Global Physical Activity Promotion Network also has an advisory board consisting of distinguished individuals in the field of physical activity and health which support the Network and its Executive Board (Table 3). Agita Mundo's main activity is the annual World Day for Physical Activity ([www.panh.ch/worldday](http://www.panh.ch/worldday)) with more than 1000 events in 38 countries on five continents registered in 2013. The World Day is coordinated by the Agita Mundo secretariat at the Centro de Estudos do Laboratório de Aptidão Física de São Caetano do Sul (CELAFISCS) in São Paulo state in Brazil. At the International Conference for Physical Activity and Public Health (ICPAPH) 2014 in Rio de Janeiro, the "Agita Mundo Award" will be presented as the global annual recognition award for outstanding activities in physical activity promotion. Further activities are discussed at the annual meetings of the network and decided on by the members of the network.

**Table 2** Executive Board of Agita Mundo, the Global Physical Activity Promotion Network, as at early 2014.

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- Brian Martin (E), University of Zurich, Switzerland (chairman)
  - Nasser Al Rahma, Dubai Sports Council
  - Adrian Bauman (AP), University of Sydney, Australia
  - Eddy Engelsman (E), The Netherlands Institute for Sport and Physical Activity: NISB
  - Shigeru Inoue, Tokyo Medical University, Japan
  - Vicki Lambert (AF), University of Cape Town, South Africa
  - Victor Matsudo (R), CELAFISCS, Brazil (founder and past chairman)
  - Michael Pratt (R), Centers for Disease Control and Prevention: CDC, USA
  - Jasem Ramadan, Kuwait University
  - Jim Whitehead (R), American College of Sports Medicine: ACSM
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(E): representative of HEPA Europe; (R): representative of RAFA/PANA, (AP): representative of APPAN; (AF): representative of AFPAN.

**Table 3** Advisory Board of Agita Mundo, the Global Physical Activity Promotion Network, as at early 2014.

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- Hamadi Benaziza, formerly WHO
  - Steven Blair, University of South Carolina, Columbia SC, USA
  - Antonio Carlos Bramante, formerly State University of Campinas (UNICAMP), Brazil
  - Maria Beatriz Rocha Ferreira, State University of Campinas(UNICAMP) and Federal University of Grande Dourados, Mato Grosso do Sul, Brazil
  - José da Silva Guedes, Santa Casa Faculty of Medical Sciences of São Paulo, Brazil
  - Harold W. Kohl, III, University of Texas, USA
  - Pekka Oja, formerly UKK Institute, Tampere, Finland
  - Neville Owen, Baker IDI Heart and Diabetes Institute, Melbourne, Australia
  - Jim Sallis, University of California, San Diego, USA
  - Willem van Mechelen, VU University Medical Centre, Amsterdam, the Netherlands
  - Ilkka Vuori, formerly UKK Institute, Tampere, Finland
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There are currently four regional physical activity promotion networks (Table 4). The Physical Activity Network of the Americas/Red de Actividad Física de las Américas RAFA/PANA was founded in 2002<sup>16)</sup> with the objective of building a network of national networks. It has currently more than 200 member institutions from 19 countries. HEPA Europe, the European Network for health-enhancing physical activity was founded in 2005, building on the experiences and the work done by a previous European network funded by the European Union from 1996 to 2001<sup>17)</sup>. The network currently has more than 130 member institutions from 30 European countries. The Asia Pacific Physical Activity Network (APPAN) as an informal communication network was founded at the University of Sydney in Australia in 2006<sup>4)</sup>. It had up to 70 members at its peak, formed of policy makers and practitioners from at least 15 countries. Given the diversity of geography, language and culture in the region, APPAN is a challenging network to sustain and develop. The African Physical Activity Network (AFPAN) was founded in 2007 and has about 200 individual and institutional members from 13 African countries.

All regional physical activity networks provide

**Table 4** Chairs, executive directors (where formally defined) and hosting institution for the secretariat of the regional physical activity promotion networks, as at early 2014.

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Physical Activity Network of the Americas/Red de Actividad Física de las Américas, RAFA/PANA ([www.rafapana.org](http://www.rafapana.org))

- President: Victor Matsudo, CELAFISCS, Brazil
- Secretariat: Centro de Estudos do Laboratório de Aptidão Física CELAFISCS, São Caetano do Sul SP, Brazil

HEPA Europe, the European Network for health-enhancing physical activity ([www.euro.who.int/hepaeurope](http://www.euro.who.int/hepaeurope))

- Chair: Tommi Vasankari, UKK Institute, Tampere, Finland
- Executive member of the steering committee: Sonja Kahlmeier, University of Zurich, Switzerland
- Secretariat: WHO's Regional Office for Europe, Copenhagen

Asia Pacific Physical Activity Network, APPAN ([www.ap-pan.org](http://www.ap-pan.org))

- Chair: Adrian Bauman, University of Sydney, Australia
- Secretariat: School of Public Health, University of Sydney, Australia

African Physical Activity Network, AFPAN ([www.afpan.weebly.com](http://www.afpan.weebly.com))

- Chair: Antonio Prista, Universidade Pedagógica, Maputo, Mozambique
  - Secretariat: Sports Science Institute of South Africa, Cape Town
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access to expertise and a platform for exchange on physical activity and health. The networks' further activities vary in their nature. RAFA/PANA and AFPAN include population based activities, with the American network particularly citing the translation of theory into practice as its main challenge and the African network describing itself as the "functioning African arm" of GAPA, the advocacy council of ISPAH. APPAN has focused on joint scientific projects and on communication on innovative programmes and policies in the geographically vast and diverse Asia and Pacific region. One example was a research project that reviewed best practices for physical activity promotion; a more recent one

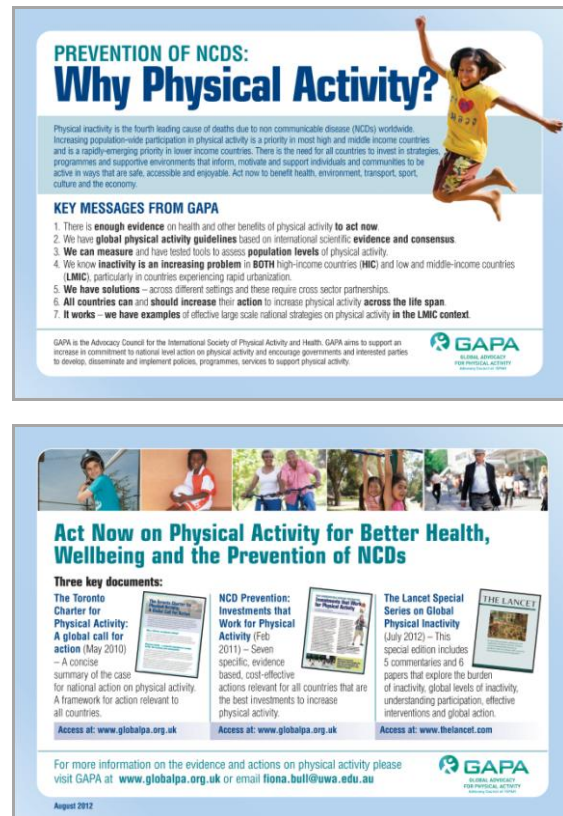
assessed physical activity surveillance across the region. The steering committee of HEPA Europe has developed an impact model for its activities which has been confirmed by the network members. HEPA Europe does not become directly active at the population level, but it supports stakeholder in their efforts to increase participation and improve the conditions for healthy lifestyles, particularly with respect to physical activity. These stakeholders and partners include the WHO, the European Commission as the administrative arm of the European Union, but also ministries, NGOs and professionals from health, sports, transport and other sectors.

### Joint action for the promotion of health-enhancing physical activity

There is close collaboration between the physical activity networks, but also with ISPAH and its different councils, particularly Global Advocacy for Physical Activity GAPA ([www.globalpa.org.uk](http://www.globalpa.org.uk)). GAPA has produced excellent advocacy material which is used by the networks, including the “Toronto Charter for Physical Activity”<sup>18-20</sup> and its supporting document on the “7 Best Investments for Physical Activity”<sup>21,22</sup> which have been translated into several languages. The “GAPA postcard” (Figure 2) is the ultimate advocacy tool for dealing with policy makers: on its front page it sums up the seven key messages on physical activity and health. On its back page it calls for action and refers to the two documents mentioned above and the Lancet Special Series on Global Physical Inactivity published in 2012 by a group of international researchers around ISPAH and the physical activity promotion networks ([www.lancet.com/series/physical-activity](http://www.lancet.com/series/physical-activity)).

However, collaboration goes beyond the use of advocacy material. For example joint meetings and events are being organised, ISPAH is the scientific partner of the Conferences of HEPA Europe, and there are joint projects with GAPA such as the development of the Health-Enhancing Physical Activity Policy Assessment Tool (HEPA PAT, [www.who.int/hepatat](http://www.who.int/hepatat))<sup>23</sup>.

Joint action is also necessary in global health policy. The enthusiasm of physical activity experts after the 2011 UN high level NCD meeting was great, but



**Figure 2** The “GAPA postcard” with key messages for physical activity advocacy on its front side, a call for action and access to key resources on its backside ([www.globalpa.org.uk/postcard](http://www.globalpa.org.uk/postcard)).

dampened considerably already in December of the same year when the first draft of WHO’s global NCD monitoring framework had indicators on tobacco, alcohol, diet, obesity and blood pressure – but none on physical inactivity. In the following weeks GAPA and the physical activity promotion networks became active, and it was possible to gain the support of important organisations such as the NCD Alliance ([www.ncdalliance.org](http://www.ncdalliance.org)). It was a victory not only for physical activity and health, but also for public health in general, when the World Health Assembly in May 2013 adopted the “omnibus resolution” on NCDs<sup>24</sup>. This resolution included the global NCD action plan 2013-2020, the development of a global coordination mechanism and the suggestion for a global monitoring framework on NCDs, now with two indicators and a reduction target for physical inactivity.

The role and the potential of physical activity for population health is only beginning to be realised, and

it will further grow with ongoing changes in society and technology. The international physical activity networks unite the leading experts in the field. Together with partner organisations from other sectors, they can play an important role in physical activity promotion. To achieve the necessary changes at the population level it will be necessary to continue collaboration between traditional partners, to forge new alliances and to secure long term resources.

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