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Systems thinking and transcending boundaries: The implementation of the Global Action Plan for Physical Activity (GAPPA) by early adopters

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Introduction

Tackling physical inactivity is identified as a priority for the World Health Organisation (WHO) and requires multi-sectoral collaboration and engagement. Evidence reveals stubborn participation gaps and inequalities globally which are mirrored across many different countries where targets for physical activity are not being met. This wicked problem requires action which transcends borders and looks for multi-sectoral action.

This paper reports on research which addresses the implementation of GAPPA by a selection of early adopters. The research focuses on a desk-based study which involved seven countries who have implemented GAPPA, followed by semi-structured interviews with 10 representatives. The developmental paper provides a short overview of the literature, followed by a methods section. This leads to the findings of the desk-based research regarding the early adopters and introduces data collected from the interviews. A final section identifies some discussion points which serve as the basis of the developmental paper.

Background Information

Guthold et al. (2018) reveal that more than a quarter of the world's population are insufficiently physically active. This led to the stark warning that 1.4 billion adults are at risk of developing or exacerbating diseases linked to physical inactivity. The WHO (2022) identifies that 27% of adults are not physically active and 80% of young people do not meet the required levels of physical activity with non-participation worse among certain populations. In response to these stark figures, the WHO set a target, to achieve a 15% relative reduction in the global prevalence of physical inactivity by 2030. Predicated on systems thinking, the Global Action Plan on Physical Activity (GAPPA) 2018-2030: More Active People for a Healthier World was launched (WHO, 2018) as a road map to reach this target. GAPPA draws on four strategic objectives that seek to create: active societies; active environments; active people and active systems. These four objectives are underpinned by 20 policy actions that are applicable to all countries (WHO, 2018) and thus this initiative serves to offer a common framework which transcends both geographical and conceptual boundaries.

The GAPPA framework is predicated on systems thinking which adopts the perspective that a system cannot be fully understood by just studying its component parts, but that the interactions, dynamics and feedback between the component parts must also be studied (Parrott & Lange, 2013). This perspective also enables the potential for systems thinking to capture the non-linearity in systems that are both dynamic and unpredictable, whilst also looking at the broader picture where the outputs of the system are generally different to the sum of its parts (Luke & Stamatakis, 2012). There has been a growing interest in systems-based approaches to physical activity (Rutter et al. 2017; Rutter et al. 2018) and research suggests (Cavill et al., 2020) that it presents an opportunity for multi-sectoral collaboration and engagement which needs to include practitioners and policy actors as well as academics.

It is relevant to note that individual countries take responsibility for setting national physical activity recommendations. Within the UK, the four Chief Medical Officers jointly recommend

that those aged 19-64 take 150 minutes of moderate intensity physical activity or 75 minutes of vigorous intensity physical activity across the week, while young people aged 5-18 are recommended at least 60 minutes of moderate or vigorous intensity physical activity per day across the week (Department of Health and Social Care, 2019). Whilst other countries have developed their own targets the levels of physical inactivity remain high and in western industrialised countries there are significant issues. Evidence has shown physical activity to be an increasingly intractable public policy issue in which ‘hard to reach groups’ (Bolton et al., 2018) including women and girls; people with disabilities; those living in poverty and ethnic minority communities record even lower activity levels. Particularly concerning is that this position worsened during the pandemic (Sport Wales, 2020; 2022) and thus the concept of proportionate universalism (Marmot et al., 2010) might be one guiding principle upon which to move forwards.

A Note on Methods

Derived from the Greek word *pragma* which means action, pragmatism has become an increasingly relevant area of interest for applied researchers. Pragmatism positions itself between the positivist and interpretivist paradigms accepting there are multiple realities open to empirical investigation (Creswell and Plano Clark 2011). It views human action as seeking to resolve wider world issues at the same time as recognising the particularities and individualism that exists and that the consequences of action means the world is in constant flux (Morgan, 2013).

The research includes an in-depth investigation of implementation by focusing on selected ‘early adopters’. It explored the international early adopters’ work to date, to understand more about the implementation and identify lessons learned or common challenges experienced with implementing GAPPa and/or systems-based approaches to promoting physical activity promotion internationally. The data were collected through a desk analysis and one-to-one, semi-structured interviews with ten representatives from seven ‘early adopting’ countries. Five of these early adopting nations were based in Europe and two in Australasia. The 10 interviewees reflected public officials and academics working in public health and physical activity and reflected the variation by early adopter countries in terms of taking a national or regional role. The research was approved by the University’s ethics committee.

Findings

The research was undertaken to investigate the extent to which the GAPPa framework was being implemented and to understand the implications for practitioners, policy actors and academics. Figure 1 introduces the early adopters that contributed to this research and drawing on the desk-based review, Table 1 provides some summary findings. Although aspects of a systems approach were evident in each of the early adopters, the specific actions taken and amount of tangible progress to date varied across these countries. The level at which systems-based action had been employed also varied. New Zealand, Australia and Ireland used a whole-systems approach to address national-level physical inactivity, whereas Finland and Scotland demonstrated evidence of action at both national and regional levels. In the final two early adopting sites – England and a joint project across Spain & France - action was evidenced solely at regional level.

Figure 1 Early Adopters of GAPPA

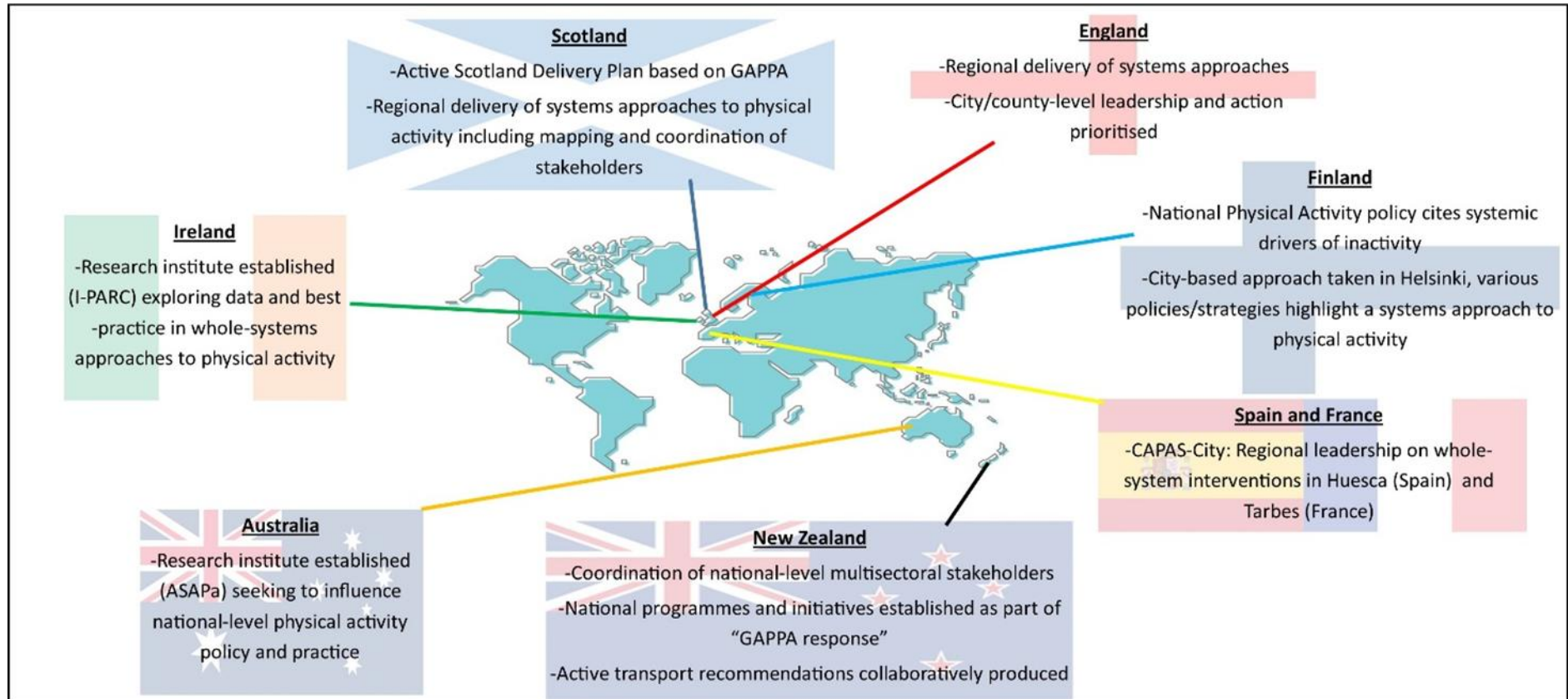


Table 1 An Overview of Early Adopters

NATION	LEVEL	ACTIVITY & OUTPUTS	SUMMARY
NEW ZEALAND	National	- Ministry of Health Output Plan - Healthy Active Learning Programme - Activity and research in the transport sector	In their 2018/19 Output Plan (Ministry of Health New Zealand, 2018), New Zealand’s Ministry of Health acknowledged the need for a whole-systems approach and cross-sectoral action to promote active living. The Healthy Active Learning Programme (Sport New Zealand, 2022) brings together key actors from the health, sport and education sectors to promote physical activity, taking a cross-agency approach informed by GAPPA. New Zealand’s GAPPA response has also influenced research and action in the transport sector. Findings have been published including key policy recommendations for active transport in the nation, as well as an approach to develop these recommendations collaboratively (Mandic et al., 2020; Mandic et al., 2019). This work is underpinned by GAPPA’s actions in relation to active transport and the recommendations reflect GAPPA priorities. <u>Key Characteristics</u> - Multi-level and cross-sectoral action facilitated by high-level political buy-in - National “response” to GAPPA across levels and sectors
AUSTRALIA	National	- Australian Systems Approaches to Physical Activity project (ASAPa) established - Getting Australia Active III launched	The establishment of the Australian Systems Approaches to Physical Activity project (ASAPa) in 2018 was the central driver for the systems approach. ASAPa consists of a national team of multidisciplinary public health academics with specialist knowledge in physical activity, active recreation and sport (Bellew et al., 2020b). The project has to date developed a conceptual map of Australia’s physical activity system (Bellew et al., 2020b) and audited existing policies to identify priorities and gaps (Nau et al., 2019). The ASAPa project also facilitated the development of <i>Getting Australia Active III</i> (Allender et al., 2020), a guiding document which seeks to build

capacity among policymakers in Australian states and territories to employ system-based approaches to promoting physical activity.

Key Characteristics

- Research and the generation of evidence for system-based approaches to physical activity driven at a national level
- Example of political will, drive, governance and an alignment of policy, action and research priorities that could facilitate system-based working to address inactivity across the country

IRELAND

National

- Irish Physical Activity Research Collaboration (I-PARC) established

Ireland took a similar approach to Australia, establishing a research centre - the Irish Physical Activity Research Collaboration (I-PARC) – to drive a national systems approach to addressing physical inactivity. I-PARC also brings together cross-disciplinary academics, practitioners and policymakers from across Ireland to promote, develop and enhance evidence-based practice on systems approaches to physical activity. I-PARC are explicit in their aim to develop and promote evidence that informs actions to promote physical activity nationally (Murphy et al., 2021).

Key Characteristics

- Research and the generation of evidence for system-based approaches to physical activity driven at a national level
- Research and action driven by bringing together key cross-sectoral stakeholders at national level

- National physical activity strategy

At a national level, the country's physical activity strategy (Ministry of Social Affairs and Health Finland (2020) cites many aspects of GAPP, including the involvement of other sectors and an appreciation of the multi-level determinants of activity. This is aligned with strategies at a regional level, namely the city of Helsinki. The Helsinki City Plan (City of Helsinki, 2017) cites physical activity promotion as a key objective and exhibits

FINLAND	National & Regional	• Helsinki City Plan • Helsinki Physical Activity Programme	characteristics of GAPPa, including consideration of physical activity settings and campaigns to promote the benefits. Furthermore, the city's physical activity programme (City of Helsinki, 2019) is clearly underpinned by GAPPa with actions targeted at individual, community and systemic level to promote physical activity. The two documents are synergistic with each other as well as the national strategy. <u>Key Characteristics</u> • Example of high-level buy-in demonstrated by the development of national policies • Example of how GAPPa guidance can drive multi-level policy coordination
SCOTLAND	National & Regional	• Active Scotland Delivery Plan • Regions identified as early adopters of whole-systems approaches to physical activity	Active Scotland's delivery plan (Active Scotland, 2018), a national policy, explicitly aligned GAPPa's four objectives with six outcomes identified as priorities for Scotland. Planned actions to promote physical activity are aligned with the GAPPa guidance, applied to the national context. At a regional level, some of Scotland's health board regions were identified as early adopters of whole-systems approaches to physical activity. This work was heavily influenced by GAPPa, with a range of actions taken including collaborative mapping of the local physical activity system, identification and alignment of key stakeholders in the region and attempts to facilitate a culture of cross-sectoral collaboration. <u>Key Characteristics</u> • Example of using GAPPa related to national context to inform policy • Regional work provides examples of how GAPPa could be translated into activities that may identify leverage points to intervene in the physical activity system in a locality A number of examples of regional GAPPa adoption were evident in England, often at city-wide or county-wide level. Broadly, these examples

ENGLAND	Regional	• Multiple city or county-wide programmes developed taking a systems approach • Leadership bodies established	exhibit characteristics including the development of cross-sectoral partnerships to promote physical activity, alignment of governance structures and investment towards enhancing workforce capacity. Policy actions were often linked to promotional campaigns and targeted interventions. An example of this is evident in Greater Manchester, where proposals to enhance the region's walking and cycling infrastructure were coupled with engagement and behaviour change initiatives (Transport for Greater Manchester, 2018). In some regions, organisational bodies were established to take a leadership role in a systems approach to physical activity. These bodies have been tasked with identifying and aligning stakeholders and establishing strategic priorities to drive a systems approach in the region. <u>Key Characteristics</u> • Regional sites provide examples of cross-sectoral partnerships and the joining up of existing and new actions • Regional sites also provide examples of leadership bodies driving systems approaches
SPAIN & FRANCE	Regional	• CAPAS-City project developed	Operating at a regional level, CAPAS-City are a leadership body, comparable to those in England who align cross-sectoral stakeholders. Further to this they lead on the design and delivery of a suite of system-based interventions in Huesca (Spain) and Tarbes (France) (Zaragoza Casterad et al., 2019). These interventions bring together a range of partners and operate across multiple settings in the regions, seeking to address the systemic drivers of physical activity. These interventions are clearly underpinned by GAPPA in that they are designed to be long-term and influence whole communities. <u>Key Characteristics</u> • Example of the scaling up and joining together of interventions to influence populations • Another example of a regional leadership function driving a systems approach

The examples presented in Figure 1 and Table 1, provide a diverse set of approaches to systems-based physical activity promotion, which is particularly useful to inform this work. The examples include countries where there is evidence of national action (New Zealand, Australia and Ireland), regional action (England, Spain and France) and combined action at both levels (Finland and Scotland). Equally, New Zealand and Australia are examples of system-based action being led by a specific sector, whereas collective leadership across sectors appears to be built in Scotland and England. Similarly, leadership on system-based physical activity has emerged at different levels. In Scotland, Finland and New Zealand, high-level strategies, policies and plans demonstrate leadership at a strategic level, while in England, Spain and France, leadership has emerged through regional organisations. There is also a balance of examples where the most prominent action has emerged from academia (Australia, Ireland), and those where more practice-based action is evident (England, Scotland, Spain and France).

The work was developed further by a series of one-to-one interviews which had two purposes. The first of these was to explore in greater depth and detail the implementation to achieve a deeper understanding of the processes and mechanisms undertaken in each early adopter site to drive a systems-based approach to physical activity. The findings were analysed using Braun and Clark's (DATE) framework and provided rich and detailed information about the implementation of GAPP. The findings from the interviews are presented under four broad themes, which include: (i) the *context and background*; (ii) the *process undertaken*; (iii) the *factors influencing success*; and (iv) *broader considerations*. The context and background of a region or nation, in terms of its political landscape and the current structures in place to promote physical activity are thought to affect the readiness for a systems approach and therefore directly impact the process that could be employed. The *process* refers to the actions taken to drive a system-based approach. The outcomes of these actions were often influenced by factors influencing success. The *broader considerations* capture overarching phenomena that impact each of these areas and that may be out of the control of system leaders. The presentation of the interview data will be addressed as part of the presentation of this paper.

Discussion and Conclusion

Physical inactivity is identified as a leading non-communicable disease which alongside tobacco, harmful use of alcohol, and unhealthy diets accounts for 41 million deaths a year (WHO, 2023). The UK mirrors the global pattern of physical inactivity and the low levels of physical activity among the nation's population suggests a need for a radical shift among industry leaders. The WHO's introduction of GAPP provides a common and unified framework for nations to introduce a systems-based approach to tackle physical inactivity. The research suggests there is variation across geographical boundaries in how the GAPP framework is implemented and that there is a positive link between those countries who have been working in this field compared to those that are new to it. Importantly, a systems-based approach seems to offer significant potential for industry stakeholders to engage and collaborate across conceptual and geographical boundaries. For this to succeed, however, it was recognised that leading national government organisations have an important role for this agenda and they will need to adopt a cross-sectoral approach to partnership in order to remove barriers (Kolovou et al., 2023). Given the increasing scale and cost of physical inactivity, especially among certain groups within society, there is a need to link resources to policy implementation and this will be a requirement in the future. This developmental paper looks to present the research and seek feedback in relation to systems-based thinking and how this might make a contribution to the field of public management and governance.

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