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ORIGINAL RESEARCH

"Getting Ireland Active"—Application of a Systems Approach to Increase Physical Activity in Ireland Using the GAPPA Framework

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Physical activity (PA) promotion is a complex challenge, with the Global Action Plan on Physical Activity (GAPPA) endorsing a systems approach and recommending countries assess existing areas of progress which can be strengthened. This paper reports a process facilitating a systems approach for identifying current good practice and gaps for promoting PA in Ireland. Elements of participatory action research were enabled through 3 stages: (1) aligning examples of actions from Irish policy documents (n = 3) to the GAPPA, (2) workshop with stakeholders across multiple sectors, and (3) review of outputs. Data collected through the workshop were analyzed using a deductive thematic analysis guided by the GAPPA. The policy context in Ireland aligns closely to the GAPPA with the creation of Active Systems the most common strategic objective across policy documents. Forty participants (50% male) took part in the systems approach workshop, which after revision resulted in 80 examples of good practice and 121 actions for greater impact. A pragmatic and replicable process facilitating a systems approach was adopted and showed current Irish policy and practices align with the GAPPA "good practices." The process provides existing areas of progress which can be strengthened, as well as the policy opportunities and practice gaps.

Keywords: collaboration, methods, participatory action research, pragmatic

Public health recommendations for physical activity (PA) are a key element of health promotion strategies globally.[1,2] Participation in PA has been shown to reduce the global burden of noncommunicable diseases, particularly cardiovascular disease, cancer, and diabetes,[3] preventing around 3.9 million premature deaths annually.[4] In addition, increases in PA across various domains (eg, transport, occupational, leisure, domestic) have potential to address several sustainable development goals (SDG),[5] such as SDG3 "good health and well-being," SDG11 "sustainable cities and communities," and SDG13 "climate action." Despite the known benefits, the multiple policies promoting PA,[6–8] and numerous PA initiatives, the proportion of people meeting the recommended PA levels is low. In Ireland, current data show that only 13.5% of children,[9] 34% of adults,[10] and 33% of older adults[11] meet the PA guidelines, making the promotion of PA a significant public health priority.

Improving population levels of PA is a complex challenge with no single solution.[2] A systems approach, defined broadly as acknowledging the complexity of a behavior and its multiple influences, and focusing on the connections, interactions, and feedback between dynamic actors, populations, and organizations, is recommended to increase PA worldwide.[12–15] Such an approach provides a framework to help examine the factors involved in a problem (eg, physical inactivity), viewing solutions as integrated across political, societal, cultural, economic, and scientific domains,[16] and taking a social–ecological view. Due to the interconnected nature of a systems approach, in theory, all actors directly or indirectly responsible for influencing PA should be involved in the process of understanding the complexity of the "system" and identifying potential solutions.[17]

A systems approach for PA promotion was used by the World Health Organization in its development of the *Global Action Plan on Physical Activity (GAPPA) 2018–2030*.[2,16] Initially, determinants or correlates of PA behavior derived from the literature[18–20] were used to generate a systems map; this map was subsequently reviewed and improved by feedback from global stakeholders representing multiple sectors.[18] The GAPPA includes 4 overarching strategic objectives and 20 associated policy actions, which are applicable and adaptable to all country contexts[2] for the purpose of enhancing population levels of PA across multiple settings. Its 4 strategic objectives are the creation of:

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- *Active societies* by *enhancing knowledge and understanding of, and appreciation for* the multiple benefits of regular PA, according to ability and at all ages (4 policy actions).
- *Active environments* both built and natural, that promote *equitable access to safe places and public spaces, in cities, towns, suburbs, and rural communities,* in which people can engage in regular PA and active travel (walking and cycling), according to ability (5 policy actions).
- *Active people* by promoting access to *opportunities and programs across multiple settings,* to help people of all ages and abilities to engage in regular PA as individuals, families, and communities (6 policy actions).
- *Active systems* through strengthened *leadership, governance, land-use planning, multisectoral partnerships, workforce, advocacy, research, and information systems* across sectors to achieve excellence in resource mobilization and implementation of coordinated international, national, and subnational action (5 policy actions).

It is recommended that "each country assess their own current situation to identify existing areas of progress which can be strengthened, as well as the policy opportunities and practice gaps"[2(p42)] The GAPPA "systems-based" roadmap could be a useful tool to help implement the GAPPA and generate better understanding of actions required for effective PA promotion. This is enabled through communication of current good practice examples and how they are interrelated, which is seen as a benefit of systems maps in general.[16] Cavill et al[21] have reported the use of systems maps to help stakeholders take a broader view of a public health problem, such as physical inactivity, as a valuable method. Assessment of the current policies and practices could result in a country-specific GAPPA roadmap leading to a better: (1) understanding of context, (2) identification of best practices for PA promotion, and (3) possible actions to achieve optimal impact for PA promotion.

The multisectoral Irish Physical Activity Research Collaboration (I-PARC)[22] was established in 2018, with funding from the Health Research Board Applied Partnership Award and Healthy Ireland. The I-PARC project team consists of 14 organizations (National Government Departments = 3, State Agencies = 5, and Research Institutions = 6) and invited international experts (n = 4). Its aim is to bring these researchers and knowledge users together to apply insight, intelligence, and innovation to the challenge of getting more people in Ireland to become more active, more often. During its establishment, I-PARC determined the need to identify areas of strength, but also gaps or points of weakness in PA policy and practice according to the GAPPA whole-of-system approach. This paper reports on the process that I-PARC adopted to facilitate reflection, planning, and improvement of communication between sectors. Furthermore, this paper presents the results from an Irish case study, which demonstrates the potential of adopting such an approach in other countries to help understand the current context and advocate the use of the GAPPA for future action.

Methods

Participatory action research (PAR) is variously termed as a dynamic educative process, an approach to social investigation, and a useful methodology from which to take action to address a problem,[23] such as physical inactivity. The PAR is based on "reflection, data collection and action that aims to improve health and reduce health inequalities"[24] through engaging stakeholders who are involved in the system. The PAR aligns well with systems appraoches,[17] as the process incorporates input from identified "experts" across various sectors to facilitate the generation of new knowledge and connections. Consequently, principles of PAR were used for this research project.

Using principles of PAR meant the study employed an open-ended research design[23] that evolved as each step was completed. Meetings (n = 3) with members of the I-PARC project team and members of the research advisory panel (ie, authors of this publication) were used to guide this process and achieve the aims of this study. The resulting process which led to the findings consisted of 3 stages used to deductively: (1) understand the current context, (2) identify current best practice and gaps for PA promotion, and (3) ensure the output had been reviewed by multiple sectors. Figure 1 demonstrates the 3 stages. Ethical approval was attained from the University of Limerick Research Ethics Committee and all participants provided informed consent before partaking in the following activities.

Stage 1—Understanding Current PA Policy Context in Ireland

The purpose of this stage was to identify relevant sectors to be involved in a systems approach workshop and create an output that would raise participant awareness of the role they play for PA promotion in Ireland and of the GAPPA. In 2019, a comprehensive policy audit was completed on 4 countries, including Ireland, using the Health Enhancing Physical Activity Policy Audit Tool.[25,26] This important contextual information revealed that Ireland had 3 national policies that directly and 15 that indirectly had a role in the promotion of PA. Those with a direct role were: *Get Ireland Active!* the *National Physical Activity Plan for Ireland* (NPAP),[6] situated within the Department of Health; the *National Sports Policy* (NSP)[7] and *Smarter Travel: A New Transport Policy for Ireland* (STP),[8] both in the Department of Transport, Tourism and Sport. Each policy document provided actions and the relevant organizations required to help achieve them. Through assessing these actions and the organizations mentioned, the project team identified relevant sectors and organizations that needed to be represented at the systems approach workshop (ie, stage 2). In addition, to help different sectors understand the current PA policy and program context and understand the role they play in this, practical examples of policy actions that aligned with the GAPPA strategic objectives were used. Researchers (n = 7) from the PA *for* Health Research Cluster at the University of Limerick,[27] assessed each policy document's actions and selected those that aligned to the GAPPA strategic objectives. This was followed by a consensus meeting where policy alignment was agreed, and where discrepancies arose, these were discussed by all researchers and consensus reached. The outcome was a document that provided examples of national policy actions from the NPAP, NSP, and STP aligned to the strategic objectives of the GAPPA. This was used to raise the awareness of the role different sectors play and of the GAPPA with participants in stage 2.

Stage 2—Identifying Current Good Practice and Gaps for PA Promotion in Ireland Using a Systems Approach

The I-PARC project team developed and implemented a 2-day workshop to identify good practice and future actions needed for the promotion of PA in Ireland, using a systems approach guided

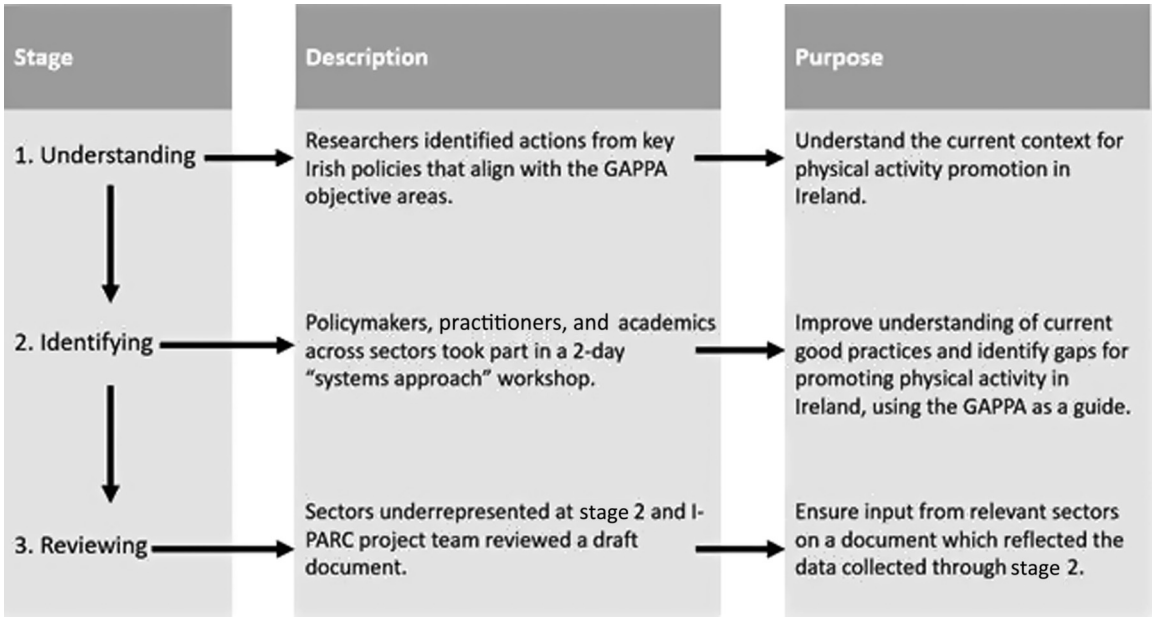

Figure 1 — The 3-stage process developed for a systems approach activity in Ireland. GAPPA indicates Global Action Plan on Physical Activity; I-PARC indicates Irish Physical Activity Research Collaboration.

by the GAPPA. Fifty-two national stakeholders with expertise in PA policy or practice across various sectors—health, sport, education, child and family services, charity, built environment and community development, transport, and academia—were invited to take part. Invitees were selected based on the knowledge gained in stage 1 but also on the knowledge and experience of the I-PARC project team.

The purpose of day 1 was to increase participants' understanding of a systems approach and its application to increasing population levels of PA.[16] Presentations by international researchers, I-PARC project team members, and practitioners facilitated interactive discussions on the usefulness of a systems approach to PA within an Irish context. The purpose of day 2, informed by the knowledge gained during day 1, was to use the GAPPA systems map and technical document[28] as a tool to identify:

1. What is Ireland currently doing well to promote population levels of PA?
2. What should be done in Ireland going forward to help increase population levels of PA?

Each question was addressed separately and sequentially by 4 groups of 10 people from a variety of sectors and areas of expertise. For each question, a 4-step process was adhered to: (1) individuals reflected on the question in private and wrote their answer on post-it notes which they posted onto a large GAPPA map next to the related policy action area, (2) individuals explained their responses to their group, (3) the group themed similar responses and noted connections within the system, and (4) the group presented summarized feedback to the full stakeholder panel. Responses that did not fall into any specific GAPPA policy action were also collected. A GAPPA map displaying good practice examples and actions for greater impact when promoting PA in Ireland was generated for each group. Data were collected via GAPPA maps, post-it notes, and group discussion notes (Figure 2).

Stage 3—Reviewing Responses and Additional Input

Following the workshop, all data were reviewed and collated by 2 I-PARC researchers (J.J.M. and J.C.) and 2 I-PARC knowledge users (B.C. and S.O.S). This involved listing all responses placed beside each GAPPA policy action area; collating those that were similar across all 4 maps and where responses fell outside of GAPPA policy action areas or were unclear; and agreeing on how the information could be categorized correctly. Discussion notes taken during the workshop were also used to help guide this process. This synthesized data were used to create a GAPPA-Ireland Map—version 1 (GIM—v1), which listed the current good practices and actions for greater impact under the policy action areas of the GAPPA.

An additional purpose of this stage was to gain input from sectors that had low or no representation at stage 2 to generate a fuller picture of the system. An additional 12 stakeholders from the transport, built environment, and children and family services (ie, who were invited to the workshop but could not attend), were invited to an online consultation conducted through Qualtrics survey software (Qualtrics, Provo, UT). Participants were invited through members of the I-PARC project team who worked with each sector. Once the invitation was accepted, participants were provided with a description of a systems approach, the workshop, the GAPPA strategic objectives, and the resultant GIM—v1. All stakeholders reviewed the responses coded under each policy action area in the GIM—v1 and were asked to submit any disagreements or suggested changes from their perspective. This information was used to revise the output with details of the full analysis provided in the following section.

Data Analysis

Responses from the workshop and online consultation were analyzed using a deductive thematic analysis guided by the GAPPA framework. Thematic analysis provides a highly flexible approach

Figure 2 — Participants engaging in the systems approach workshop and an example GAPPA map with good practice examples and actions for greater impact. GAPPA indicates Global Action Plan on Physical Activity.

Table 1 Mapping of the 3 Irish Policy Documents to the GAPPA Strategic Objectives

	GAPPA strategic objectives, %				
Policy document	Active societies	Active environments	Active people	Active systems[a]	Not applicable
NPAP	23.3	6.7	30.0	40.0	—
NSP	12.3	1.8	17.5	52.6	15.8
STP	8.2	24.5	2.0	26.5	38.8

Abbreviations: GAPPA, Global Action Plan on Physical Activity; NPAP, National Physical Activity Plan; NSP, National Sports Policy; STP, Smarter Travel Policy.
[a]Some policy actions that were seen as creating "Active Systems" were also linked to other areas, such as creating "Active Environments."

that can be modified for the needs of many studies to allow for a complex account of the data.[29] The approach was guided by Braun and Clarke's 6 phases of reflexive thematic analysis: (1) familiarization with the data, (2) generating initial codes, (3) searching for themes, (4) reviewing themes, (5) defining and naming themes, and (6) producing a report.[29] Due to the deductive approach, the generating, defining, and naming of themes was predetermined by the policy action areas of the GAPPA. While a deductive approach tends to produce a less rich description of the data,[29] it was deemed fit for purpose due to the use of the GAPPA framework to guide the analysis. To ensure credibility in the analysis, 4 authors took part in the initial coding activity (J.J.M., J.C., S.O.S., and B.C.), using the GAPPA policy action areas and definitions as a codebook.[28] In addition, C.B.W. cross-checked all coding of responses and provided feedback. A meeting was held between J.J.M, J.C., and C.B.W. to reach agreement regarding any conflicts. This output created the GIM—v1 used in stage 3. Once the final feedback was provided through the online consultation, J.J.M., J.C., and C.B.W. reviewed the responses which resulted in the GIM—v2. The GIM—v2 was circulated with the full author team for review to ensure accuracy and completeness. Any additional feedback received was incorporated into a final document by J.J.M. and C.B.W. to create the GAPPA-Ireland Map (Supplementary Materials 1–4 [available online]). This process helped to ensure all authors were involved during the analysis stage, allowing for a more rich and well-rounded analysis of the data. The final responses were labeled as good practice examples or suggested actions for greater impact and categorized under the relevant policy actions of the GAPPA. The frequency and proportion (in percentage) of responses under each label and in each category were recorded and are presented in the results.

Results

Table 1 provides a breakdown of how the policy actions within the 3 national policy documents aligned to the GAPPA strategic objectives. Overall, the policy context in Ireland aligns closely to the GAPPA (ie, 100% of actions from the NPAP, 84.2% from the NSP, and 61.2% from the STP aligned to the strategic objectives) with each policy having a different focus on how it supports PA promotion based on the GAPPA strategic objectives. The creation of Active Systems was the most common strategic objective across all policy documents, ranging from 26.5% to 52.6%. The NPAP and NSP contained more examples of policy actions that aligned to "Active Societies" (23.3% and 12.3%) and "Active People" (30.0% and 17.5%) than the STP (8.2% and 2.0%). Example policy actions from the STP were more closely aligned with "Active Environments" (24.5%) when compared with the NPAP (6.7%) and NSP (1.8%). Details regarding specific policy actions and how they align to the GAPPA objectives are available in Supplementary Material 5.

In stages 2 and 3, 40 participants (76.9% response rate and 50% male) took part in the workshop and 9 participants in the online consultation (75% response rate). Participants were from the academia (n = 16; 32.7%), sport (n = 12; 24.5%), health (n = 11; 22.4%), education (n = 3; 6.1%), transport (n = 2; 4.1%), charity (n = 2; 4.1%), built environment (n = 2; 4.1%), and child and

family services (n = 1; 2.0%) sectors. Participants listed as "academics" had expertise in sport, health, education, transport, and built environment. Almost 400 (N = 392) pieces of data (ie, responses) were collected and analyzed, with common data collated (resulting in the reduction in pieces of data by 191). This resulted in the identification of 80 current examples of good practice (39.8%) and 121 suggested actions for greater impact (60.2%). The proportions of good practices and suggested actions for greater impact identified under each GAPPA strategic objective are described below (with examples provided in Table 2). All current good practices and actions for greater impact themed under each of the GAPPA strategic objectives are available in Supplementary Materials 1–4.

Create Active Societies

Under the strategic objective "create active societies," almost half (n = 14; 45.2%) of the 31 responses collected during the consultation were deemed good practice, while 54.8% (n = 17) were suggested actions for greater impact. Over 40% (42.9%; n = 6) of the good practice examples identified related to the strength of professional knowledge, within and outside the health sector, as well as in grassroots community groups and civil society organizations. The implementation of social marketing campaigns linked with community-based programs made up 35.3% (n = 6) of the suggested actions for greater impact.

Create Active Environments

Under the strategic objective "create active environments," 34.9% (n = 15) of the 43 responses collected were examples of good practice, while 65.1% (n = 28) were suggestions for greater impact. Of the good practices identified, over a quarter of them (26.7%, n = 4) related to access to good-quality public and green spaces, green networks, recreational spaces, and sports amenities. Most suggested actions for greater impact related to the improvement of walking and cycling network infrastructure (n = 8; 28.6%) and the strengthening of policy, regulatory, and design guidelines (n = 7; 25.0%). Both policy actions relating to integration of urban and transport planning policies, and the strengthening of road safety for pedestrians and cyclists, made up 17.9% (n = 5) of suggested actions for greater impact.

Create Active People

Under the strategic objective "create active people," almost half of the 64 responses collected were good practice examples (n = 29; 45.3%). Good practices related to the provision of programs and services to support older adults, implementation of programs in multiple settings outside of the school setting, and engagement of communities to implement initiatives at the city, town, or local level made up 24.1% (n = 7), 20.7% (n = 6), and 17.2% (n = 5), respectively. A breakdown of the suggested actions shows that ensuring provision of physical education and positive opportunities for PA across education sectors (n = 8; 22.9%), provision of programs and services to support older adults (n = 6; 17.1%), implementation of programs and services increasing opportunities for PA in the least active groups (n = 5; 14.3%), and engaging communities to implement initiatives at different levels (n = 5; 14.3%) were preferentially identified.

Create Active Systems

Under the strategic objective "create active systems," one-third (n = 22; 34.9%) of the 63 responses were good practice examples while 65.1% (n = 41) were suggestions for greater impact. Most of the good practice examples related to the strength of national and subnational policies (n = 6; 27.3%), strength of research and evaluation capacity to inform effective policy solutions (n = 5; 22.7%), and advocacy efforts which increase awareness, knowledge, and joint action (n = 4; 18.2%). Most suggested actions for greater impact were categorized under the strengthening of national and subnational policies, recommendations and action plans, and establishment of multisectoral coordination mechanisms (n = 10; 24.3%). Other actions for greater impact related to strengthening research and evaluation (n = 7; 17.1%), enhancing data systems (n = 7; 17.1%), increasing advocacy efforts (n = 5; 12.2%), and strengthening finance mechanisms to ensure sustainability (n = 5; 12.2%).

Discussion

This paper illustrates the pragmatic and replicable process that I-PARC adopted to facilitate a systems approach workshop, and presents some of the key findings generated. The process acknowledges the complexity of PA behavior and its influences and focuses on connections, interactions, and feedback between elements of the system in the "real world." It moves us away from traditional linear forms of intervention design and evaluation by considering a systems perspective, which incorporates the development of strategies to shift or re-imagine the system through effective cross-sectoral collaboration. The process, guided by the GAPPA,[2] facilitated knowledge sharing and provided stakeholders with the opportunity to visualize, identify, and clearly define their roles and responsibilities in relation to PA promotion. Examples of the strengths were established, but importantly, areas of duplication and gaps within the Irish PA landscape were found. This type of surveillance is necessary to avoid uncoordinated action, limiting potential for real change. Bellew et al[30] described the national PA systems map developed by the Australian Systems Approaches to Physical Activity project as "the end of the beginning" rather than an end in itself. Similarly, the shared understanding and networks established through this process can begin to use the knowledge gained to promote PA and population health.

During the first stage, which aligned example policy actions[6–8] with the GAPPA, several observations were noted. Reviewing the actions of each policy document showed that they are aligned with the objectives of the GAPPA, and that policy actions within each document are interlinked. However, it was difficult to establish connections between policy actions working to support the promotion of PA across different sectors and target groups. For example, no policy action was identified that aligned with the provision of programs and services to support older adults' PA, although 7 good practices were identified for this during the workshop and online consultation. This could mean that practice does not reflect policy actions or in fact that there is a lack of connection between policy actions and related national initiatives, such as the Healthy and Positive Aging Initiative,[31] which does support PA promotion in older populations. One recommendation from these findings is to acknowledge the relationships between national policies (n = 18[26]) and initiatives in Ireland to enable a systems approach for PA promotion. For this, specific policy actions tasking the key implementers to identify, align, and support existing national policies and initiatives where possible will highlight the way in which these policies and initiatives, and the narrative around them, connect and support one another. Cross-sector partnership between government departments was noted as a

Table 2 Good Practice Examples and Actions for Greater Impact Identified Within the GAPPA Framework

	Responses collected through I-PARC workshop		
		Examples from systems approach process	
GAPPA policy actions	**Description**	**Current good practice**	**Actions for greater impact**
Create active societies			
1.1. Implement social marketing campaigns linked with community-based programs.	Four (40.0%) current good practice and 6 (60.0%) actions for greater impact were identified.	Good use of social marketing campaigns to promote physical activity participation (eg, European Week of Sport).	Implement a wide variety of social marketing campaigns for specific target groups.
1.2. Promote the co-benefits of physical activity, particularly from walking and cycling.	Two (33.3%) good practice and 4 (66.7%) actions for greater impact were identified.	Cross-sectoral engagement at a national level for promoting the significant benefits of physical activity for health.	Translate evidence into relevant messages for specific stakeholders (especially all departments, eg, planning and engineering, agencies, and key personnel).
1.3. Implement regular mass participation initiatives.	Two (40.0%) good practice and 3 (60.0%) actions for greater impact were identified.	Working in partnership to deliver mass participation events (eg, mini marathon, parkrun) and training programs to increase engagement in mass participative events.	Ensure a balance of mass participation events that are affordable and accessible (eg, inclusion of play and outdoor recreation events and not just traditional sporting).
1.4. Strengthen professional knowledge, within and outside the health sector, as well as in grassroots community groups and civil society organizations.	Six (60.0%) good practice and 4 (40.0%) actions for greater impact were identified.	Availability of education and continued professional development for multiple sectors (eg, organizational levels, volunteers, disability, and disadvantaged groups).	Explore potential of further/continuing education providers to deliver courses to up skill local instructors and volunteers.
Create active environments			
Overarching actions related to the creation of active environments.	Two (100.0%) good practice identified.	Inclusion of appropriate actions in Healthy Ireland Plan, Local Economic Community Plan, Community Development Plans, Regional Enterprise Plans, etc.	No actions for greater impact identified.
2.1. Integrate urban and transport planning policies and prioritize the principles of compact, mixed-land use to deliver highly connected neighborhoods.	Three (37.5%) good practice and 5 (62.5%) actions for greater impact were identified.	Engagement between government department and national transport agencies to overcome several issues around transport planning.	Reach and inform more potential respondents through wider consultation mechanisms. Land-use and transportation planners and engineers need to be part of this consultation process as their decisions have significant impacts.
2.2. Improve walking and cycling network infrastructure.	Three (27.3%) good practice and 8 (72.7%) actions for greater impact were identified.	Increases in available funding provided by government for improving walking and cycling infrastructure.	Increase capacity of communities to audit infrastructure and advocate/lobby for change. Audits need to be a normal part of the process.
2.3. Implement and enforce road safety and personal safety measures to improve the safety of pedestrians, cyclists, and other vulnerable road users.	Three (37.5%) good practice and 5 (62.5%) actions for greater impact were identified.	Significant safe cycling infrastructure planned and under construction.	Promote safe cycling by lowering the speed limits of motor vehicles in cities, towns and suburbs and promoting segregated cycle lanes/paths; promote safer walking with wider footpaths, better cross-walks, and slower traffic speed limits. Safe cycling and walking routes to schools should be organized and encouraged. Public policies should promote walking and cycling to work and to shop.
2.4. Improve access to good-quality public and green open spaces, green networks, recreational spaces (including river and coastal areas), and sports amenities.	Four (57.1%) good practice and 3 (42.9 %) actions for greater impact were identified.	Inclusive design of public spaces with community consultation.	Protect and improve access and quality of open spaces and not just green spaces. Include the expertise of urban designers and landscape architects.

(continued)

Table 2 ***(continued)***

GAPPA policy actions	Responses collected through I-PARC workshop		
		Examples from systems approach process	
	Description	Current good practice	Actions for greater impact
2.5. Strengthen the policy, regulatory and design guidelines to enable all occupants and visitors to be active in and around the public buildings.	Zero (0.0%) good practice and 7 (100.0%) actions for greater impact were identified.	No good practice identified.	Support for enhanced planning policies that enable physical activity in and around buildings, urban streets, and in local areas.
Create active people			
Overarching actions	Four (100.0%) actions for greater impact were identified.	No good practice identified.	Increase use of technology to help engage more people to be physically active.
3.1. Ensure provision of good-quality physical education and positive opportunities for physical activity across preprimary to tertiary educational settings.	Four (33.3%) good practice and 8 (66.7%) actions for greater impact were identified.	Teacher education provided by the professional development service for teachers (includes physical education and well-being).	Support schools with extracurricular activity and links to community sport.
3.2. Implement systems of patient assessment and counseling on physical activity in primary and secondary health care and social services.	Three (50.0%) good practice and 3 (50.0%) actions for greater impact were identified.	Increasing awareness of the importance of physical activity in health service staff (eg, further roll out of Making Every Contact Count initiative).	Up-skill staff at public leisure centers to deliver appropriate clinical exercise pathways.
3.3. Implement programs in workplace, sport, and faith-based settings, and in public open spaces and other community venues, to increase opportunities for physical activity.	Six (60.0%) good practice and 4 (40.0%) actions for greater impact were identified.	Range of voluntary led programs implemented (eg, parkrun, Gaelic Athletic Association Healthy Clubs).	Assess local need to ensure programs are appropriate to locality and user groups.
3.4. Provide appropriately tailored programs and services to support older adults to start and maintain regular physical activity.	Seven (53.8%) good practice and 6 (46.2%) actions for greater impact were identified.	Research conducted for improving physical activity in older people (eg, Healthy & Positive Aging Initiative).	More funding/subsidization to allow individuals with lower income (ie, people on pension) to engage in physical activity programs.
3.5. Implement programs and services that increase the opportunities for physical activity in the least active groups.	Four (44.4%) good practice and 5 (55.6%) actions for greater impact were identified.	Better delivery of cost effective programs (eg, Couch to 5K, daily mile, parkrun, CycleRight).	Emphasize the need for evidence-based programs with more time provide to see sustained behavior change.
3.6. Whole of community: engage communities to implement comprehensive initiatives at the city, town, or local level.	Five (50.0%) good practice and 5 (50.0%) actions for greater impact were identified.	Good examples of community-wide initiatives (eg, community sport and physical activity hubs and active communities).	Continue tackling gaps within the community (eg, gender, disability, and socio-economic status).
Create active systems			
Overarching actions	Two (22.2%) good practice and 7 (77.8%) actions for greater impact were identified.	Expert knowledge of what works for promoting physical activity available in Ireland.	More funding for research, evaluation, and monitoring (especially around the efficacy of implementation and data mining).
4.1. Strengthen national and subnational policies, recommendations and action plans, and establish multisectoral coordination mechanisms.	Five (33.3%) good practice and 10 (66.7%) actions for greater impact were identified.	Increased collaboration between research, practice, and policy (eg, I-PARC).	Enhance leadership for important actions and ensure appropriate linkage and oversight of stakeholder(s) responsible for implementation.
4.2. Enhance information systems and digital technologies to strengthen monitoring and decision making.	Two (22.2%) good practice and 7 (77.8%) actions for greater impact were identified.	Improvement in children's physical activity monitoring.	Develop centralized register of programs, activities, and resources to enable wider cooperation and less overlap.
4.3. Strengthen research and evaluation capacity to inform effective policy solutions.	Five (41.7%) good practice and 7 (58.3%) actions for greater impact were identified.	Collaborative research projects examining physical activity promotion at both a national and international level.	Structured evaluation—embedded and informing implementation.
4.4. Advocacy: escalate advocacy efforts to increase awareness, knowledge, and joint action.	Four (44.4%) good practice and 5 (55.6%) actions for greater impact were identified.	Nongovernment organization driving physical activity promotion.	Sustain collaborative platforms (eg, I-PARC).
4.5. Strengthen financing mechanisms to ensure sustainability.	Three (37.5%) good practice and 5 (62.5%) actions for greater impact were identified.	Increasing investment and emphasis on collaboration between stakeholders (eg, Healthy Ireland Fund, National Sports Policy).	Use of cost and benefit analysis data for interventions/policies.

Abbreviations: GAPPA, Global Action Plan on Physical Activity; I-PARC, Irish Physical Activity Research Collaboration.

"current good practice," but it is not planned systematically or measured as a key performance indicator. This would provide a mandate for cross-sector collaboration and partnership, helping governments and organizations at a national, regional, and local level to be logical and consistent, and to avoid unnecessary duplication in their policy actions to achieve a shared goal.[32] Identification of gaps within policy and the successful implementation of policy actions to bridge these gaps, using existing knowledge,[2,33] and the generation of new research, insights, and investment, each have the potential to influence the PA levels and overall health of an entire population.

It is important for relevant stakeholders within the Irish "system" to utilize the knowledge generated from this approach and identify areas that are seen as lacking support or that have current good practice but warrant additional support. A key observation is how certain good practice examples in the system are interlinked with and rely upon good practice in other parts of the system. To illustrate, most good practice examples within the creation of active societies related to the building of workforce capacity. For high-quality capacity building to be available, the funding and organizational support to deliver it must be available, and these come from good practice under active systems. An example of this national-to-local support for increased workforce capacity is seen with the Local Sports Partnership network, which is an initiative run through Sport Ireland, a national agency, "to create a national structure to co-ordinate and promote the development of sport and participation at a local level."[6] Continued organizational and educational support is also needed for the volunteer networks which were noted as a current good practice and can also serve as an intervention to enhance PA levels.[34]

Good practices that involved multisectoral collaboration were noted throughout the 4 objective areas. This was evident on both a policy (eg, "cross government communications" or "collaboration between partners to increase awareness, knowledge and joint action") and practice level (eg, "good examples of community-wide initiatives" or "sectors working in collaboration to improve PA in older people"). In Ireland, efforts have been made to support collaboration, through innovative funding mechanisms (eg, Healthy Ireland Fund, Dormant Accounts), collaborative research projects, and the establishment of a collaboration to connect research, policy, and practice (ie, I-PARC). Continued collaboration is encouraged, with Guthold et al[35] stating that "collaboration across sectors could generate significant returns, because policies that support increasing PA can provide benefits to health, local economies, community wellbeing, and environmental sustainability." The themes of support from other areas of the system and intersectoral collaboration were also evident for the creation of active environments, with both needed for the provision of initiatives (eg, Healthy Cities), infrastructure (eg, for cycling and walking), and "green spaces," which has been found to have multiple health benefits.[36]

The systems approach workshop also produced suggested actions that may generate greater impact for promoting population levels of PA which are described here. Reflective of the current good practice, the suggested actions rely on other areas of the system for collaborative action, advocacy, and organizational support (including financial). This was acknowledged by the participants, who noted that the creation of an "active system" is needed to enable the creation of active societies, environments, and people. This need for support is highlighted by Shilton,[37] who noted that "political advocacy should be a central element of PA advocacy" to ensure political commitment and in the current context support the policy actions within the GAPPA. A recommendation therefore would be that rather than 4 similar sized quadrants, the "active systems" quadrant should be larger, due to its potency for the other 3 quadrants.

For Ireland, the suggested actions for greater impact within the "active system" related to enhanced support and the renewal of policies (eg, National Physical Activity Plan) and governance structures currently in place for promotion of PA and overall health, increased support for collaboration across sectors, and additional funding or dedicated budgets for advocacy needs, interdisciplinary policy actions, and research development. The need for an "active system" in order to consolidate other areas is again highlighted in the creation of "active environments," where additional funding and organizational support for strengthening policy, regulatory, and design guidelines for PA engagement in and around public buildings and public places, and the improvement of walking and cycling infrastructure, are warranted. There is a pressing need to re-engineer work, school, neighborhood, and home environments to make PA and active travel an easy option.[38] For example, the advent of COVID-19 has presented some opportunities to rethink how we organize our society and economy and may be an opportunity to set a new norm. Suburbs must be planned and designed with an eye toward making them mixed-use and pedestrian-oriented suburban villages instead of car-dependent estates.[39] In general, the improvement of walking and cycling network infrastructure was identified as an important area in actions for greater impact. Improving infrastructure to support walking and cycling is often regarded as fundamental for their widespread uptake[40] and its importance has been emphasized by the United Nations Environment Program, which recommends that national and city policymakers set aside 20% of the total transport budget for nonmotorized active transport programs.[41] Further support for intervention development, implementation, and scale-up in various settings was also highlighted as a need for the future by participants. For this, collaborative action is needed between key stakeholders to agree upon evaluation indicators and outcome measures that can allow for comparability between projects and aid evidence-based decision making at multiple levels.[42]

From an international perspective, this information offers an Irish case study which other countries could adopt to understand current progress for PA promotion in relation to the GAPPA. This case study demonstrates the potential of such an approach to understand the current context for PA promotion but also advocate for the use of the GAPPA when planning and directing future actions. Key to the success of this workshop was ensuring that the relevant stakeholders were identified (stage 1) but also aware of the role they play for PA promotion, the GAPPA, and benefits of using a systems approach (stage 1 and 2). How this is achieved can be flexible, with a need to assess the supports available to aid the process of ensuring this awareness and engagement. Our methods show how this was achieved in the Irish context, providing potential strategies for other countries, but several aspects aided the process and need to be acknowledged. The role I-PARC played needs to be taken into consideration when other countries attempt to unite actors from different sectors to conduct this "systems approach" workshop. The role I-PARC,[22] as a multisectoral collaboration, played in aiding the recruitment of stakeholders from various sectors was also a strength. A future role of I-PARC can be to monitor how this process is utilized going forward, evaluating the impact it has on the future context as progress is made. The establishment of a multisectoral collaboration to support such an activity is recommended. If a multisectoral collaboration like I-PARC does not exist in your country, then the first step is to

advocate for such a collaboration. In Ireland's experience, academia played a major role in this advocacy. Bringing evidence of the potential impact of such a collaboration and the use a systems approach to the attention of a national or subnational organization that has PA promotion on its agenda (eg, Department of Health) and the potential to communicate this message to other sectors was the initial step. From I-PARC's experience, building a successful multisectoral collaboration also relies on investing time to build relationships, co-creation of a shared vision while also acknowledging different sectors perspectives, distinguishing roles within the team, and a structured meeting schedule that works for all those involved to ensure constant and effective communication.

Limitations also need to be noted from this work. Review of the policy was limited to the actions within the 3 documents and each policy was allocated to one GAPPA action area, which may have led to a restricted view of the overall policy narrative. In addition, researchers completed the review of policy actions and the inclusion of policy makers from the relevant departments in this process may have provided greater insight. If used, future assessment of policy actions using the GAPPA is recommended to involve a broader range of stakeholders in the process and to consider the narrative around each policy action. Finally, the lack of or underrepresentation of certain sectors creates a challenge with ensuring that all relevant voices are heard.[17,21,43] Future activities trying to understand the system that supports PA engagement will need coordination, communication, and partnership across the myriad of stakeholders who can effect change.[43] The authors believe that a multisectoral collaboration, such as I-PARC, and the use of pragmatic approaches can help overcome the challenge of engaging all relevant stakeholders.

Conclusion

In conclusion, this paper presents an Irish case study that demonstrates the learnings from a applying a pragmatic systems approach with multiple sectors. Our approach used the GAPPA to concentrate on the arguably more important step of building a shared understanding and it is hoped that this work will encourage a move away from "traditional" approaches of working in silos with discrete activities occurring in a linear fashion, to "systems" approaches that are tailored to the context, are dynamic and adaptive, and are devolved, engaging practitioners in co-production.[44] As illustrated in this work, participatory action research is a promising methodology to increase communication and understanding of the promotion of PA among diverse stakeholder groups. Actors within the Irish system should consider the good practice examples and suggested actions (Supplementary Materials 1–4 [available online]) when planning future policy and practice, with these findings recommending the need to ensure "active systems" are in place to support the creation of active societies, environments, and people. To create a change in the system, a range of leadership and governance practices will be required.[44] The strategies and approaches used in this case study can be adopted by other countries to understand the current context for PA promotion but can also be used to raise awareness and advocate use of the GAPPA within other countries, which is important for its implementation.[45] Finally, the creation of a GAPPA "implementation map or framework" is merited and could be used as a tool to help further engage stakeholders. As stated, we are at "the end of the beginning"[30] and need to utilize the shared understanding from this work to mobilize multiple sectors in collaboration for the promotion of PA.

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