Brief Tools for the Assessment of Physical Activity in Primary Care Settings: An Expert-Informed Narrative Review

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Executive summary

Policy rationale – The Department of Health and Social Care (DHSC) requested an assessment of the suitability of the General Practice Physical Activity Questionnaire (GPPAQ) for assessing physical activity (PA) in primary care, particularly in older adults. This work was commissioned to inform future policy decisions on assessment of PA in primary care, including whether the GPPAQ is an appropriate tool for assessment, may require modification to make it suitable, or should be replaced with a more suitable alternative.

What we did - We consulted four PA expert academics and three general practitioners (GPs) through semi-structured interviews to identify alternative tools to the GPPAQ, develop criteria by which to judge the effectiveness of different tools, and identify key sources of evidence. A rapid evidence review, informed by this expert input, was then conducted to evaluate the brief PA assessment tools identified by the experts as being suitable for use in primary care in the UK. Searches were conducted in MEDLINE and Google Scholar to identify relevant systematic reviews and primary studies. Information on tool characteristics and evaluation criteria were extracted and compared. Findings were synthesised and integrated to summarise the relative strengths and weaknesses of each tool. This work forms part of a larger project, delivered in collaboration with the Healthy Ageing Policy Research Unit (HAPRU), to generate integrated evidence and actionable recommendations that will strengthen PA assessment in primary care.

Key findings

We identified eight brief tools, of which four, including the GPPAQ, were judged to be appropriate for assessing PA in primary care settings. The four tools are:

- General Practice Physical Activity Questionnaire (GPPAQ) – measures overall activity levels based on occupation and recreational activity.
- Physical Activity Vital Sign (PAVS) – measures minutes per week of moderate-to-vigorous PA through two brief questions.
- Exercise Vital Sign (EVS) – measures minutes per week of moderate-to-vigorous PA through two brief questions.
- International Physical Activity Questionnaire – Short Form (IPAQ-SF) – measures activity across walking, moderate, and vigorous domains of PA.

All four tools were feasible and acceptable for use in primary care, though accuracy and validity varied.

- GPPAQ was found to be simple, quick, and reliable. It was good at identifying inactive individuals but showed poor-to-moderate validity when compared with objective measures of PA, and often underestimated activity, particularly among older adults.
- PAVS was found to be simple, and quick. It was good at identifying inactive individuals, though often underestimated total activity, and had lower validity among women and those with lower educational attainment.
- EVS was found to be simple, quick, and reliable. It was moderately effective at identifying inactive individuals, although it often incorrectly estimated moderate to vigorous physical activity (MVPA). Its accuracy also differed between men and women and across UK study populations.
- IPAQ-SF was found to be simple and reliable. It showed poor-to-moderate validity when compared with objective measures of PA, and its comparatively longer format limits feasibility in primary care.

Whilst all four tools are relatively good at identifying people who are inactive, none demonstrate high accuracy at measuring absolute levels of physical activity compared with objective measures (e.g. accelerometery). Brief screening tools inherently lack the depth to capture all dimensions of physical activity (e.g., different activity domains, intensities, frequencies, and contexts). This restricts their precision for accurately quantifying the amount of PA an individual undertakes; however, they can discriminate between individuals who are inactive (and who may benefit from a physical activity intervention) and those who are active or somewhat active. They are also limited to the assessment of aerobic physical activity and do not consider strength or balance activities, which can be particularly important in older age.

Despite their feasibility for use in primary care, GPPAQ and the other three tools are not widely used in UK primary care. When the GPPAQ is used to identify people who are inactive, there is limited standardisation regarding when the tool is used, who it is used with, and what follow-up processes occur afterwards.

Overall, GPPAQ, PAVS, EVS and IPAQ-SF are practical options for identifying inactive individuals in primary care. However, a beneficial impact from their use will depend on their integration into clinical workflows leading to intervention, e.g. brief advice, or referral for support. Standardising their use in clinical setting and ensuring clear guidance on what happens after assessment could strengthen their role in supporting a holistic approach to promoting physical activity that accounts for individuals' capabilities, opportunities, and motivation to be active. However, more research is needed to determine the most effective ways to implement these tools in routine practice.

Introduction

The health benefits of being physically active are extensively documented.[1] These include a reduced risk of premature mortality, prevention of numerous chronic diseases and conditions, and improved mental health and well-being.[2, 3] Despite these benefits, around 20% of the UK population is physically inactive, a figure expected to rise to 35% by 2030.[2] Inadequate physical activity (PA) is linked to one in six deaths in the UK and is estimated to cost the economy £7.4 billion annually, including £0.9 billion in costs to the National Health Service (NHS).[2] Physical inactivity remains a major public health concern in the UK and elsewhere.[4]

The UK Chief Medical Officers' (CMO) Physical Activity Guidelines for adults recommends[5]:

- Being physically active four to five times a week, if not every day
- Accumulating at least 150 minutes of moderate intensity activity (such as brisk walking or cycling); or 75 minutes of vigorous intensity activity (such as running); or even shorter durations of very vigorous intensity activity (such as sprinting or stair climbing); or a combination of all each week
- Performing muscle-strengthening activities on at least two days per week
- Minimising the amount of time spent being sedentary

The capability and motivation to be physically active are influenced by a range of personal, socioeconomic, and environmental factors.[6, 7] Individuals living with obesity or chronic conditions may face physical, psychological, or social barriers[6], while those from lower-income or minority groups often have limited access to facilities or live in environments that are less conducive to being active.[7] Assessing PA levels in primary care can serve as a valuable opportunity for healthcare professionals to tailor advice and interventions to individual needs.

In the UK, PA assessment has been integrated into routine NHS practice, primarily by being embedded within the NHS Health Check as part of primary care,[8] for which 15 million patients in mid- to later-life (40-74 years) are eligible.[9] The National Institute for Health and Care Excellence (NICE) recommends that general practitioners (GPs) deliver brief PA advice to patients who are not meeting recommended activity levels, as assessed by the General Practice Physical Activity Questionnaire (GPPAQ), a brief screening tool specifically developed for primary care.[10, 11] The GPPAQ has been in use for almost two decades and is validated for adults aged 16–74 years.[11]

Although GPPAQ is the recommended tool, evidence on its current implementation is limited, and its continued suitability for assessing PA in primary care, particularly in older adults, remains unclear. Since the wider evidence on PA assessment tools in primary care has not been comprehensively evaluated, the Department of Health and Social Care (DHSC), commissioned this

work to better understand the evidence base supporting the use of the GPPAQ and alternative tools. This report forms part of that overall piece of work.

Aims and objectives

This report presents findings structured around four research questions and corresponding objectives, developed iteratively through expert consultations and initial scoping searches to align with the policy request.

Research questions	Objectives
RQ 1: What brief PA tools are appropriate for use in primary care, and what do they measure?	• Identify brief PA assessment tools and evaluate the questions.
RQ 2a: How feasible is each tool for use in primary care? **RQ 2b:** What is their validity, accuracy, reliability, acceptability, and inclusivity for each tool?	• Assess each tool's feasibility for use in primary care, (duration/number of questions, administrative burden). • Assess reliability, accuracy and validity of tools against what they are designed to measure and with objective measures. • Assess acceptability and inclusivity across population subgroups, such as age, gender, ethnicity, socioeconomic background, and health status.
RQ 3: What additional information is required to identify patients who would benefit from and be capable of doing a PA intervention?	• Identify information needed beyond PA to inform intervention decisions, such as capability, opportunity, and motivation.
RQ 4: What limitations exist within the current evidence base?	• Highlight key gaps and limitations in the current literature.

Methods

Expert consultations

To address the research questions and to inform the evidence review, we interviewed four PA expert academics and three GPs, whom we approached through our professional networks. Each interview lasted between 30 to 45 minutes and followed a semi-structured format, allowing for focused discussion while enabling experts to share broader perspectives (See Appendix 1, for interview topic guide). The interviews aimed to;

a. Generate a list of possible alternative brief PA tools.
b. Develop criteria for evaluating the effectiveness of each tool for use in primary care.
c. Consider how the relative strengths and weaknesses of each tool might be compared.
d. Highlight any key academic and policy documents for inclusion in the review.

Evidence review

Inclusion criteria were established to identify PA assessment tools relevant to the review. Tools were required to be:

- Specifically designed or suitable to assess PA in primary care settings,
- Brief i.e., could be completed in roughly 2–4 minutes,
- Designed to be inclusive across age, sex, ethnic and socioeconomic groups.

We used a systematic approach to conduct a rapid evidence review. An initial scoping search was conducted in Google Scholar to identify relevant systematic reviews using search terms such as "physical activity assessment tool," "review," "evaluation," "validity," and "reliability." These reviews helped establish the existing evidence base and identify gaps in the systematic review literature. To address the gaps in the systematic review literature, a more focused search of primary studies was conducted in MEDLINE. Search terms combined tool-specific names identified during consultations with broader descriptors relating to PA assessment tools (e.g., questionnaires, tools, measure, screening), setting (e.g., general practice, primary care), and evaluation measures (e.g., validity, feasibility, acceptability, and inclusivity). The full search strategy is provided in Appendix 2. Additional records provided by experts or from citation searching were also included.

Primary studies were excluded if they focused solely on long-form (> 5 mins) or research-oriented questionnaires; evaluated tools not designed for use in primary care settings; or were published in languages other than English.

We extracted data on: (i) characteristics of the tools (e.g., content, number of questions, administration time), and; (ii) relevant evaluation measures including validity, accuracy, reliability feasibility, acceptability (for patients and practitioners), and inclusivity across subgroups.

We developed our key criteria based on the measurement properties most consistently reported in the literature. We did consider using the COSMIN checklist for evaluating the methodological quality of studies on measurement properties.[12] However, the evidence base did not provide sufficient detail on each measurement property. Instead, we used a shortened list of measurement properties, set out in the Box 1 below, to assess the performance of the different tools.

Box 1: Definitions of key criteria

In this report we use the following terms. We recognise these terms can be used differently in the literature, but we use these terms to distinguish between important concepts in how the different physical activity tools perform.

- **Validity**[1] – Ability of a tool to accurately measure the amount of PA it was intended to assess, as determined by comparison with a gold-standard measure (objective measurement of PA).
- **Accuracy**[2] **–** Ability of a tool to correctly identify individuals who are truly physically active, i.e. meeting recommended physical activity levels (150 minutes of moderate-to-vigorous PA) or inactive, i.e. not engaging in at least 30 minutes of moderate-to-vigorous PA, as determined by comparison with a gold-standard measure.
- **Reliability** – Ability of a tool to produce consistent or repeatable results under the same conditions, i.e. the test-rest reliability.
- **Feasibility** - Practicality of implementing or administering the tool, while considering time, cost, equipment, and expertise.
- **Acceptability** - Degree to which participants or clinicians find the measure appropriate, non-burdensome, and useable in primary care setting.
- **Inclusivity** - Suitability of a tool for use in diverse demographic and socioeconomic populations.

Data extracted from reviews and primary studies were summarised in a cross-tool comparison table, which mapped each tool against key measures. Supplementary narrative synthesis was then undertaken to further describe the relative strengths and weaknesses of different tools, highlight evidence gaps, and outline implications for research, policy, and practice. Findings from the expert consultations were highlighted in the evidence synthesis, particularly where the literature provided was limited or had inconsistent findings.

[1] The concept of validity is simplified here for clarity. In this study, validity is considered primarily in terms of criterion validity, as there is limited evidence available for other forms of validity.

[2] We have simplified sensitivity (accurately identifying those who are truly active) and specificity (accurately identifying those who are truly inactive) into the umbrella term "accuracy" for ease of understanding.

Results

Expert Consultation

From our consultations, we identified three additional PA assessment tools that met our inclusion criteria and were considered relevant for use in primary care:

- Exercise Vital Sign (EVS)
- Physical Activity Vital Sign (PAVS)
- International Physical Activity Questionnaire – Short Form (IPAQ-SF)

Across the consultations, experts viewed GPPAQ, PAVS, EVS, and IPAQ-SF as useful but fundamentally limited tools for assessing PA in primary care, each with its own strengths and weaknesses. GPPAQ was consistently seen as outdated, rarely used, overly reliant on occupational activity, and insufficiently inclusive. PAVS and EVS were described as simple and quick screening tools that align well with PA guidelines and create less burden than longer questionnaires. However, both tools rely on terms like "moderate" and "vigorous" activity, which many patients often do not understand without substantial explanation, undermining their time-saving purpose. IPAQ-SF, while widely validated, internationally translated, and familiar in research, was noted to have significant recall bias, to over- or underestimate activity, and to exclude strength-based activities; however, it was perceived as more adaptable and better suited to population comparison than individual counselling. Across the four tools, experts highlighted recurring concerns: difficulty for patients in interpreting PA intensity categories, limited accuracy against device-based measures, overly simplistic outputs, and a lack of clear clinical guidance for GPs. They agreed the tools can serve as useful screening aids but are insufficient on their own for personalised, meaningful conversations about PA without clearer definitions, better integration, and support for behaviour-change discussions.

Literature review

Following the consultation, we conducted a rapid evidence review and identified four additional brief tools, including the 3-Question Physical Activity Questionnaire (3Q), 2-Question Physical Activity Questionnaire (2Q), Stanford Brief Activity Survey (SBAS), and the Brief Physical Activity Assessment Tool (BPAAT). In total, 33 studies met the inclusion criteria, of which 10 were systematic reviews[13-22] and 23 were primary studies[23-45]. Table 1 summarises the characteristics of the included tools, and Table 2 compares them against key evaluation criteria. Our narrative synthesis focuses primarily on the GPPAQ, PAVS, EVS, and IPAQ-SF, as these were most frequently referenced by experts and had the strongest and most consistent evidence. Full details of the remaining tools, including estimates, are provided in Appendix 3.

Table 1. *Description of the PA assessment tools*

Tool (Origin)	Characteristics	What it measures	Outputs
General Practice Physical Activity Questionnaire[14, 18, 21, 23, 24, 27, 29, 30, 33-36, 38, 42, 45] *(UK)*	3 items; ~ 1-2 mins; clinician-administered	(1) Occupational PA; (2) non-occupational activity over the past week (e.g. walking, housework, etc); and (3) usual walking pace.	Classifies respondents to Physical Activity Index (PAI) categories: "Active", "Moderately Active", "Moderately Inactive" and "Inactive".
Physical Activity Vital Sign[13, 14, 18, 20, 25, 26] *(USA)*	2 items; <30 secs; clinician-administered	Weekly frequency and duration of MVPA.	Provides an estimate of total weekly minutes of MVPA; classifies respondents as meeting or not meeting PA guidelines.
Exercise Vital Sign[13, 14, 20, 31, 35, 37, 39, 43] *(USA)*	2 items; <30 secs; self- or clinician-administered	Weekly frequency and duration of MVPA.	Provides an estimate of total weekly minutes of MVPA; classifies respondents as meeting or not meeting PA guidelines.
International Physical Activity Questionnaire – Short Form[15-17, 19, 21, 32, 40] *(International collaboration)*	7 items; ~ 2-4 mins; self-administered	Frequency and duration of MVPA and walking over the past 7 days; also includes sedentary time.	Provides total weekly PA in MET-min/week and classifies respondents into "Low", "Moderate", or "High" PA levels.
Stanford Brief Activity Survey[14] *(USA)*	2 items; <4 mins; self-administered	(1) Occupational PA; (2) Leisure-time PA (e.g., walking, jogging, tennis).	Five overall PA intensity categories: "Inactive", "Light", "Moderate", "Hard", "Very Hard".
Three-question physical activity tool[18, 20] *(Australia)*	3 items; ~1 min; self-administered	(1) Frequency of MVPA activity and; (2) frequency of ≥30-minute of walking per usual week.	Provides an estimate of total weekly minutes of MVPA; classifies respondents as meeting or not meeting PA guidelines.
Two-question physical activity tool[18, 20] *(Australia)*	2 items; <30 secs; self-administered	(1) Frequency of MVPA activity and; (2) frequency of ≥30-minute of walking per usual week.	Provides an estimate of total weekly minutes of MVPA; classifies respondents as meeting or not meeting PA guidelines.
Brief Physical Activity Assessment Tool[18, 41] *(USA)*	2 items; NR; clinician-administered	Weekly frequency and duration of MVPA	Provides an estimate of total weekly minutes of MVPA; classifies respondents as sufficiently active or insufficiently active based on WHO guidelines.

MPVA – moderate-to-vigorous physical activity, PA – physical activity, EMR – electronic medical record, HCP – healthcare practitioner, UK – United Kingdom, USA – United States of America, WHO – World Health Organization.

General Practice Physical Activity Questionnaire

Overall, GPPAQ demonstrated poor-to-moderate validity for measuring general PA levels.[18, 23, 33] Evidence suggests GPPAQ generally underestimated PA levels, particularly among individuals who are not employed or those whose primary activity is walking. Both these factors mean it will underestimate the amount of PA undertaken by older adults who are much less likely to be employed and for whom walking is a relatively more important and dominant activity.[23, 28] In terms of accuracy, the GPPAQ was effective in identifying inactive individuals but often failed to recognise those achieving recommended PA levels (>150 minutes of MVPA per week; low sensitivity), as determined by comparison with accelerometer data.[14, 18, 21, 23, 35, 38, 45] Modifying the tool to include walking (GPPAQ-WALK) increased the number of participants classified as active but also increased the proportion of adults classified as active who were assessed as inactive using objective measures. This reflects a trade-off between improved detection of active individuals and reduced overall accuracy, when compared with accelerometery.[23, 38, 45] There was some evidence that suggested GPPAQ and GPPAQ-WALK performance may vary by age, gender and employment, but none of the reported differences were statistically significant.[45] The tool demonstrated moderate-to-good reliability (test-retest) across studies.[23, 24, 33, 45]

The literature and experts identified GPPAQ as a feasible and acceptable tool for assessing PA levels in primary care.[27, 29, 30, 34, 36, 42] It was reported to be simple and quick to administer, easy for patients to complete, and useful for facilitating discussions about PA in primary care. Clinicians we spoke to also reported that the results easy to interpret and communicate to patients.

Physical Activity Vital Sign

The PAVS demonstrated moderate validity for measuring MVPA when compared with accelerometer data.[13, 14, 18, 25, 26] It also showed a strong correlation with self-reported weekly minutes of activity measured by the longer, validated Modifiable Activity Questionnaire (MAQ), particularly among men, and younger adults.[26] However, participants generally reported fewer weekly minutes of activity on PAVS than on the MAQ (average difference −86.3 minutes/week), highlighting that PAVS performs best for identifying activity status rather than precise activity duration.[13, 25, 26] The tool is also highly accurate at identifying individuals who are inactive, correctly classifying low-activity participants 91% of the time in one study[25], its ability to detect active individuals was limited, as many participants were reported to overestimate.[13, 18, 25] In terms of inclusivity, the tool demonstrated lower validity among women and individuals with lower education levels, suggesting potential inclusivity limitations for these groups.[26]

Expert and clinicians told us PAVS is brief, easy to use, and can typically be completed in under a minute during routine consultations making it a feasible tool for use in primary care. We did not identify any evidence evaluating the reliability or acceptability.

Exercise Vital Sign

The EVS demonstrated poor-to-moderate validity for measuring MVPA when compared with accelerometer data.[14, 20, 31, 35, 37, 39, 43] Continuous MVPA measures from EVS show limited correlations with accelerometery[39], indicating that the tool moderately reflects objectively measured activity. One study reported that EVS overestimated weekly MVPA, with an average overestimation of ~66 minutes per week[35], while another study found that participants slightly underestimated MVPA by 24 minutes/week, translating to a daily discrepancy of ~3.3 min/day compared with accelerometer data.[43] Overestimation was found to be particularly notable among UK men, while estimates for UK women were more similar to accelerometer data.[35] Overall, the EVS captures general MVPA but shows variable validity. In terms of accuracy, evidence showed variability in EVS's ability to identify inactive individuals across studies.[13, 31, 35, 37, 39, 43] EVS was moderately accurate in identifying active participants, but with marked variability across studies. Overall, EVS may be useful for screening inactive individuals in need of intervention, but its variability may limit its effectiveness in accurately identifying individuals in the general population.

The tool was reported to have good reliability[43], and was found to be feasible and acceptable for use in primary care. In addition to being brief and easy to administer, EVS was found to be well accepted by clinical professionals and patients.[31]

International Physical Activity Questionnaire – Short Form

In terms of validity, IPAQ-SF demonstrated poor-to-moderate agreement with objective measures.[15-17, 19, 21, 32, 40] Correlations were strongest for walking, followed by moderate and vigorous activity, when compared with accelerometer, or fitness data (e.g., VO_2max, treadmill time). Across studies, time spent walking showed the most consistent and highest correlations with objective measures, indicating that the IPAQ-SF performs best for estimating walking-related activity.[17] The tool underestimated total PA and sedentary time compared to accelerometer measurements, and the results varied widely between individuals, suggesting limited precision for individual-level assessment.[40] The tool also demonstrated variable accuracy across different ages and some limitations in assessing individuals with higher physical impairments.[40]

The IPAQ-SF demonstrated good reliability,[32] and was reported be an acceptable and suitable tool for population surveillance by experts. It was preferred over the longer version 27 item questionnaire

of the tool (IPAQ-L) due to its simplicity and reduced administrative burden.[32] While IPAQ-SF is brief and can be completed relatively quickly, the seven-question format makes it longer than the GPPAQ, EVS, and PAVS. We found no evidence assessing the tool's ability to identify people who are active and inactive in clinical or population-based settings.

Table 2. Comparison of Key Criteria of Brief Physical Activity Assessment Tools

Tools	Feasibility	Acceptability	Reliability	Validity	Accuracy - identify active participants	Accurate - identify inactive participants	Inclusivity
General Practice Physical activity questionnaire	Good[29, 36]	Good[27, 30, 34, 36, 42]	Moderate-to-good[23, 24, 33, 45]	Poor-to-moderate[18, 23, 33]	Poor-to-moderate[14, 18, 21, 23, 35, 38, 45]	Good[14, 18, 21, 23, 35, 38, 45]	Poor[45]
Physical Activity Vital Sign	Good	No evidence	No evidence	Moderate[13, 14, 18, 20, 25, 26]	Poor[13, 14, 18, 20, 25]	Good[13, 14, 18, 20, 25]	Poor-to-moderate[26]
Exercise Vital Sign	Good	Good[31]	Good[43]	Poor-to-moderate[14, 20, 31, 35, 37, 39, 43]	Moderate[13, 14, 20, 31, 35, 37, 39, 43]	Moderate to good[13, 14, 20, 31, 35, 37, 39, 43]	Poor-to-moderate[35]
International Physical Activity Questionnaire – Short Form	Moderate	Good[32]	Good[32]	Poor-to-moderate[15-17, 19, 21, 32, 40]	No evidence	No evidence	Moderate[40]
Stanford Brief Activity Survey	Good	No evidence	No evidence	Poor-to-moderate[14, 37]	Poor-to-moderate[14, 37]	Moderate to good[14, 37]	No evidence
Three-question physical activity tool	Good	Moderate[34, 44]	Moderate[18, 33, 34, 44]	Moderate[18, 33, 34, 44]	No evidence	No evidence	No evidence
Two-question physical activity tool	Good	Moderate-to-good[18, 44]	Moderate[18, 44]	Poor-to-moderate[18, 44]	No evidence	No evidence	No evidence
Brief Physical Activity Assessment Tool	Good	No evidence	Moderate-to-good[18]	Poor-to-moderate[18]	No evidence	No evidence	No evidence

Discussion

This review identified four brief PA assessment tools commonly used or considered suitable for primary care, including the GPPAQ, PAVS, EVS, and IPAQ-SF. A further four tools were also identified, but they were considered less suitable for use in primary care in the UK as there was less experience of their use and the evidence base is weaker. For routine use in primary care, the GPPAQ, PAVS and EVS were the most feasible, being briefer (<30 seconds) and easy to administer within consultations, whereas the IPAQ-SF, although comprehensive, was comparatively longer and less practical in time-limited primary care settings. Across the four tools, validity and accuracy varied considerably. Generally, tools tended to be better at identifying people who were inactive than people who were meeting physical activity guidelines. In terms of validity, PAVS demonstrated stronger correlation with objective or validated self-report measures than GPPAQ or EVS, though both tended to underestimate total activity. Evidence on inclusivity was limited but based on limited data the IPAQ-SF performed the best. The PAVS demonstrated lower validity among women and individuals with lower educational attainment, while the IPAQ-SF and GPPAQ demonstrated age-related variability.

Overall, based on the evidence the PAVS and EVS appeared best suited for brief screening of inactivity, whereas the IPAQ-SF showed greater utility for population surveillance. The GPPAQ, and the GPPAQ-WALK, remain as practical options for use in primary care, but performed less well than PAVS. We found no studies that specifically compared all four of these tools.

Accuracy

None of the brief PA assessment tools demonstrated strong accuracy compared to objective measures, reflecting an inherent limitation of short questionnaires. By design, these tools prioritise feasibility over detail, meaning they lack the depth required to capture the full range and context of PA behaviours. Correct classification of activity levels and accurate distinction between general activity and MVPA, requires a greater number of more detailed questions to capture the complexity of different activity domains, intensities, frequencies and contexts. As a result, while short tools are valuable for quickly identifying inactive individuals, their accuracy in determining whether individuals meet recommended activity levels remains limited. This trade-off highlights a key challenge in primary care, balancing the need for efficient assessment with the complexity of accurately capturing the multifaceted nature of PA.

Validity

In terms of validity, differences across the tools reflect the distinct aspects of PA that they measure. Some tools, such as GPPAQ and SBAS, primarily focus on general or leisure-time activity, while

others, like PAVS or EVS, predominantly measure MVPA. GPPAQ also incorporates work-based activity, which may distort total activity estimates for certain occupational groups. As these tools focus on different aspects of activity, it is hard to compare them directly, as well as compare their accuracy with objective measures like accelerometers. In particular, tools that assess occupational activity may underestimate total PA in individuals whose activity occurs primarily outside of work, while those focused on MVPA may miss lighter forms of activity that still contribute to overall health. Consequently, reported validity depends not only on tool quality but also on how well each tool's conceptual focus aligns with the aspect of activity being measured.

If the primary goal is to identify inactive individuals, then brief tools such as PAVS, GPPAQ, and EVS are generally fit for purpose. Despite their limited validity for estimating total or MVPA, all three demonstrated reasonable accuracy in classifying individuals with low activity levels, making them useful for screening and prompting discussion in primary care. PAVS, in particular, showed the highest accuracy for identifying inactivity, while GPPAQ and EVS also performed adequately. In contrast, while the IPAQ-SF provides more detailed information, it is less practical for quick screening, and no evidence was found evaluating its ability to accurately distinguish between active and inactive individuals. This lack of evidence highlights the need for further research to determine whether the tool is effective at identifying inactivity or if its diagnostic value has simply not yet been sufficiently tested. Therefore, if the key objective is to detect inactivity rather than quantify total activity levels or status, simpler tools that can be administered rapidly during consultations can be effective and feasible options.

Inclusivity

Evidence indicating the inclusivity of the tools was limited, and inconsistent reporting across studies highlights the need for further research to assess their performance across diverse demographic and socioeconomic groups. The IPAQ-SF appears to be the most inclusive tool based on available data, it performs reasonably consistently across sex groups, with only age-related variability in accuracy.[40] GPPAQ and EVS showed some evidence of variation by gender, age, and employment status although these differences were generally not statistically significant. However, there remains a notable lack of evidence on inclusivity for PAVS and limited exploration of population subgroup differences for the other tools.

Other observations and factors to consider

General barriers to the use of PA assessment

Despite the need for brief PA assessment tools in primary care, their implementation faces several barriers, including time constraints during consultations, limited training, competing clinical

priorities and lack of clear guidance on when to use the tool, for whom and what to do with findings.[36, 46] While most clinicians reported awareness of the GPPAQ (70%, n = 705), fewer than half indicated regular use (40%, n = 401).[30] A notable proportion were not familiar with any PA assessment tools (26%, n = 266), and over half reported not using any tool at all (55%, n = 560).[30] Although informative, these findings are drawn from a 2016 survey, examining GPPAQ use in practice; consequently, levels of awareness and use may not reflect current patterns. Familiarity with the CMO recommendations was positively associated with both awareness and use of the GPPAQ, whereas clinicians unfamiliar with the guidelines were less likely to know about or use any tools.[30] These barriers suggest that the challenge lies not with the tool itself, but with the support structures surrounding its use, such as training, workflow integration, and prioritisation of PA assessment within routine care.

Implications for Practice

While brief PA assessment tools show potential for identifying inactive individuals, there remains limited evidence on how effectively they support the next steps, including identifying those who are capable, motivated, and able to engage in PA interventions. This gap highlights the need to better integrate such tools into structured approaches to behaviour change. The Moving Medicine initiative provides evidence-based frameworks and has demonstrated positive outcomes in supporting clinicians to initiate meaningful PA conversations, particularly when interventions are grounded in behaviour change theory. Successful implementation was associated with strong leadership, trusted clinical champions, and dedicated staff to deliver interventions, demonstrating that both individual and system-level support are important.[47]

Effective implementation relies not only on the availability of suitable tools but also on ensuring that practitioners receive adequate training in their use and interpretation. Standardisation is required both in when these assessments are administered, for whom and in defining what follows to ensure consistent and effective patient support. Furthermore, variability in primary care settings, such as differences in consultation length, staffing, and patient demographics, may limit the generalisability of findings and impact how feasible or effective these tools are in routine practice.

Limitations

This review has limitations that should be acknowledged. First, the inclusion of expert opinion may have introduced bias toward tools that are more familiar or commonly used in clinical practice in the UK, such as the GPPAQ, which was developed and primarily implemented within UK primary care. Second, the rapid nature of this review, which drew on a single database, may have limited the comprehensiveness of the evidence, meaning that some relevant studies may not have been captured.

Although we did not follow a fully systematic methodology (we did not assess risk of bias or the quality of evidence), we did employ a robust and transparent approach informed by expert input, ensuring that findings remained grounded in available evidence and practical relevance. Additionally, substantial heterogeneity across the included studies posed challenges for synthesis and comparison. Variations in validation methods, populations studied, time intervals between repeated measurements, and statistical analyses used to assess reliability and validity, limited our ability to draw direct comparisons between tools and may have influenced the apparent performance of individual measures.

Gaps in Evidence and Further Research

There were no studies identified that explored what additional information or questions might be needed to more effectively identify patients who would benefit from, and be capable of, engaging in a PA intervention. This represents a clear gap in the literature and an important area for future research. We note the absence of studies directly comparing the different tools head-to-head, and the relatively limited consideration of how the tools perform in different sub-groups within the population. Further research should include,

- Studies using standardised criteria to directly compare physical activity assessment tools, to determine their relative validity, accuracy, reliability, and feasibility in primary care.
- Studies examining the inclusivity of these tools, to better understand their performance across differences in sex, age, ethnicity, literacy, occupation, mobility, and cultural context.

Considerations and suggestions for policy makers

- The existing evidence base is limited and currently insufficient to identify a single ‘best’ PA assessment tool for use in primary care. More robust comparative research is needed before definitive recommendations can be made.
- Clarification of the intended purpose of PA assessment tools is needed. Is the primary objective to quantify total activity levels and assess against CMO recommendations or to identify individuals who are physically inactive. Evidence suggests that GPPAQ, PAVS and EVS can perform well in identifying individuals who are physically inactive but are not accurate tools in estimating total activity levels.
- Modifications to the GPPAQ (e.g., GPPAQ-WALK), may improve suitability for diverse patient populations and can enhance inclusivity and accuracy in classification.
- While not directly drawn from the evidence, standardisation and integration of PA assessment within primary care workflows should be prioritised. Establishing national guidance,

standardised pathways, and consistent training for clinicians would support more reliable use of PA assessment tools and reduce variation in practice.

- Greater system-level support is needed to embed PA assessment within structured behaviour-change pathways. Integrating assessment tools into initiatives, such as the Moving Medicine, can strengthen implementation and improve outcomes for patients.
- A system-wide approach can improve identification of patients who would benefit from PA interventions. Effective integration ensures that tools are used not only to classify inactivity but also to support holistic care, considering individuals' capability, opportunity, and motivation to be more active.

References

1. Warburton DER, Bredin SSD. Health benefits of physical activity: a systematic review of current systematic reviews. Current opinion in cardiology. 2017;32(5):541–56.
2. Disparities OfHIa. Physical activity: applying All Our Health 2022 [Available from: https://www.gov.uk/government/publications/physical-activity-applying-all-our-health/physical-activity-applying-all-our-health.
3. Mahindru A, Patil P, Agrawal V. Role of Physical Activity on Mental Health and Well-Being: A Review. Cureus. 2023;15(1):e33475.
4. Lee IM, Shiroma EJ, Lobelo F, Puska P, Blair SN, Katzmarzyk PT. Effect of physical inactivity on major non-communicable diseases worldwide: an analysis of burden of disease and life expectancy. Lancet (London, England). 2012;380(9838):219–29.
5. Charlie Foster JR, Russell Jago, Marie Murphy, Dawn Skelton, Ashley Cooper, Richard Pulsford, Brett Smith, Kate Willis, Catherine Falconer. UK Chief Medical Officers' Physical Activity Guidelines. In: Care DoHaS, editor. 2019.
6. Baillot A, Chenail S, Barros Polita N, Simoneau M, Libourel M, Nazon E, et al. Physical activity motives, barriers, and preferences in people with obesity: A systematic review. PloS one. 2021;16(6):e0253114.
7. Eime RM, Charity MJ, Harvey JT, Payne WR. Participation in sport and physical activity: associations with socio-economic status and geographical remoteness. BMC Public Health. 2015;15(1):434.
8. Keighley Hylton KT, Matt Kearney, Catherine Lagord. NHS Health Check - Best practice guidance For commissioners and providers. In: England PH, editor. 2019.
9. Disparities OfHIa. NHS Health Checks: applying All Our Health 2022 [Available from: https://www.gov.uk/government/publications/nhs-health-checks-applying-all-our-health/nhs-health-checks-applying-all-our-health.
10. Excellence NIfHaC. Physical activity: brief advice for adults in primary care London: NICE; 2013 [Available from: https://www.nice.org.uk/guidance/ph44.
11. Physical Activity Policy HID. The General Practice Physical Activity Questionnaire (GPPAQ) Guidance 2009 [Available from: https://assets.publishing.service.gov.uk/media/5a7ac84ee5274a319e77ab03/GPPAQ_-_guidance.pdf.
12. Mokkink LB, Terwee CB, Knol DL, Stratford PW, Alonso J, Patrick DL, et al. The COSMIN checklist for evaluating the methodological quality of studies on measurement properties: a clarification of its content. BMC Med Res Methodol. 2010;10:22.
13. Dannemiller M, Shadiack A, Sineath M, Jr., Baird A, Poirier M, Thomas K, et al. Exercise Is a Vital Sign. HCA healthcare journal of medicine. 2024;5(3):225–36.
14. Golightly YM, Allen KD, Ambrose KR, Stiller JL, Evenson KR, Voisin C, et al. Physical Activity as a Vital Sign: A Systematic Review. Preventing chronic disease. 2017;14:E123.
15. Helmerhorst HHJF, Brage S, Warren J, Besson H, Ekelund U. A systematic review of reliability and objective criterion-related validity of physical activity questionnaires. International Journal of Behavioral Nutrition and Physical Activity. 2012;9(1):103.
16. Kim Y, Park I, Kang M. Convergent validity of the international physical activity questionnaire (IPAQ): meta-analysis. Public health nutrition. 2013;16(3):440–52.
17. Lee PH, Macfarlane DJ, Lam TH, Stewart SM. Validity of the International Physical Activity Questionnaire Short Form (IPAQ-SF): a systematic review. The international journal of behavioral nutrition and physical activity. 2011;8:115.

18. Smith TO, McKenna MC, Salter C, Hardeman W, Richardson K, Hillsdon M, et al. A systematic review of the physical activity assessment tools used in primary care. Family Practice. 2017;34(4):384–91.
19. van Poppel MN, Chinapaw MJ, Mokkink LB, van Mechelen W, Terwee CB. Physical activity questionnaires for adults: a systematic review of measurement properties. Sports Med. 2010;40(7):565–600.
20. Wald A, Garber CE. A Review of Current Literature on Vital Sign Assessment of Physical Activity in Primary Care. Journal of nursing scholarship : an official publication of Sigma Theta Tau International Honor Society of Nursing. 2018;50(1):65–73.
21. Sattler MC, Jaunig J, Tösch C, Watson ED, Mokkink LB, Dietz P, et al. Current Evidence of Measurement Properties of Physical Activity Questionnaires for Older Adults: An Updated Systematic Review. Sports Med. 2020;50(7):1271–315.
22. Tcymbal A, Messing S, Mait R, Perez RG, Akter T, Rakovac I, et al. Validity, reliability, and readability of single-item and short physical activity questionnaires for use in surveillance: A systematic review. PloS one. 2024;19(3):e0300003.
23. Ahmad S, Harris T, Limb E, Kerry S, Victor C, Ekelund U, et al. Evaluation of reliability and validity of the General Practice Physical Activity Questionnaire (GPPAQ) in 60-74 year old primary care patients. BMC family practice. 2015;16:113.
24. Arma N, Rosnah I, Noor Hassim I. Psychometric properties of the Malay-translated General Practice Physical Activity Questionnaire among shipyard workers. The Medical journal of Malaysia. 2017;72(6):350–5.
25. Ball TJ, Joy EA, Goh TL, Hannon JC, Gren LH, Shaw JM. Validity of two brief primary care physical activity questionnaires with accelerometry in clinic staff. Primary Health Care Research & Development. 2014;16(1):100–8.
26. Ball TJ, Joy EA, Gren LH, Shaw JM. Concurrent Validity of a Self-Reported Physical Activity "Vital Sign" Questionnaire With Adult Primary Care Patients. Preventing chronic disease. 2016;13:E16.
27. Barrett EM, Hussey J, Darker CD. Feasibility of a physical activity pathway for Irish primary care physiotherapy services. Physiotherapy. 2017;103(1):106–12.
28. Bélanger M, Townsend N, Foster C. Age-related differences in physical activity profiles of English adults. Preventive Medicine. 2011;52(3):247–9.
29. Bull FC, Milton KE. A process evaluation of a "physical activity pathway" in the primary care setting. BMC Public Health. 2010;10:463.
30. Chatterjee R, Chapman T, Brannan MG, Varney J. GPs' knowledge, use, and confidence in national physical activity and health guidelines and tools: a questionnaire-based survey of general practice in England. The British journal of general practice : the journal of the Royal College of General Practitioners. 2017;67(663):e668–e75.
31. Coleman KJ, Ngor E, Reynolds K, Quinn VP, Koebnick C, Young DR, et al. Initial validation of an exercise "vital sign" in electronic medical records. Medicine and science in sports and exercise. 2012;44(11):2071–6.
32. Craig CL, Marshall AL, SjÖStrÖM M, Bauman AE, Booth ML, Ainsworth BE, et al. International Physical Activity Questionnaire: 12-Country Reliability and Validity. Medicine & Science in Sports & Exercise. 2003;35(8).
33. Dutton SN, Bauman A, Dennis SM, Zwar N, Harris MF. Resourcing an evolution of roles in general-practice: a study to determine the validity and reliability of tools to assist nurses and patients to assess physical activity. Australian journal of primary health. 2016;22(6):505–9.
34. Dutton SN, Dennis SM, Zwar N, Harris MF. An explorative qualitative study on acceptability of physical activity assessment instruments among primary care professionals in southern Sydney. BMC family practice. 2016;17(1):138.

35. Fitzgerald L, Ozemek C, Jarrett H, Kaminsky LA. Accelerometer Validation of Questionnaires Used in Clinical Settings to Assess MVPA. Medicine and science in sports and exercise. 2015;47(7):1538–42.
36. Heron N, Tully MA, McKinley MC, Cupples ME. Physical activity assessment in practice: a mixed methods study of GPPAQ use in primary care. BMC family practice. 2014;15:11.
37. Joseph RP, Keller C, Adams MA, Ainsworth BE. Validity of two brief physical activity questionnaires with accelerometers among African-American women. Prim Health Care Res Dev. 2016;17(3):265–76.
38. Kanavaki AM, Michalopoulou M, Stathi A, Kouli E, Gourgoulis V, Gkrekidis A, et al. Validity of the General Practice Physical Activity Questionnaire (GPPAQ) in adults 60–90 years. Journal of Public Health. 2024.
39. Kuntz JL, Young DR, Saelens BE, Frank LD, Meenan RT, Dickerson JF, et al. Validity of the Exercise Vital Sign Tool to Assess Physical Activity. American journal of preventive medicine. 2021;60(6):866–72.
40. Lavelle G, Noorkoiv M, Theis N, Korff T, Kilbride C, Baltzopoulos V, et al. Validity of the International Physical Activity Questionnaire Short Form (IPAQ-SF) as a measure of physical activity (PA) in young people with cerebral palsy: A cross-sectional study. Physiotherapy. 2020;107:209–15.
41. Li C, Auld G, Crouter SE, Palmer-Keenan DM. Validation of a Brief Physical Activity Assessment Tool for Adults With Limited Resources. Journal of Nutrition Education and Behavior. 2025;57(2):86–98.
42. Lowe A, Myers A, Quirk H, Blackshaw J, Palanee S, Copeland R. Physical activity promotion by GPs: a cross-sectional survey in England. BJGP open. 2022;6(3).
43. Quiles NN, McCullough AK, Piao L. Validity and Reliability of the Exercise Vital Sign Questionnaire in an Ethnically Diverse Group: A Pilot Study. Journal of primary care & community health. 2019;10:2150132719844062.
44. Smith BJ, Marshall AL, Huang N. Screening for Physical Activity in Family Practice: Evaluation of Two Brief Assessment Tools. American journal of preventive medicine. 2005;29(4):256–64.
45. Wilkinson TJ, Palmer J, Gore EF, Smith AC. The validity of the 'General Practice Physical Activity Questionnaire' against accelerometery in patients with chronic kidney disease. Physiotherapy theory and practice. 2022;38(10):1528–37.
46. Lin CY, Gentile NL, Bale L, Rice M, Lee ES, Ray LS, et al. Implementation of a Physical Activity Vital Sign in Primary Care: Associations Between Physical Activity, Demographic Characteristics, and Chronic Disease Burden. Preventing chronic disease. 2022;19:E33.
47. Copeland R, Myers A, Quirk H, Crank H, Broom D, Goldsmith S. Evaluation of the Public Health England and Sport England Funded Sport and Exercise Medicine Pilot in Secondary Care. 2019.

Appendix 1.

Topic guide for expert consultation:

Topic 1: GPPAQ Utility

- Do you use GPPAQ in your current practice?
- If not, how do you assess a patient's physical activity levels?
    - [Prompt] How easy is it to engage patients regarding their physical activity levels?
    - [Prompt] How easy is it to engage patients when using a physical activity assessment tool?
    - [Prompt] If a patient is identified as needing an intervention, what referral pathways are used?
- [Only ask if they use or aware of GPPAQ] How effective is GPPAQ is capturing a person's physical activity level?
- [Only ask if they use or aware of GPPAQ] What are the limitations of GPPAQ in practice?
    - [Prompt] To what extent can GPPAQ capture physical activity levels across different groups of people?

Topic 2: Alternative Physical Assessment Tools

- Are you aware of any other physical activity assessment tools, apart from GPPAQ?
- What are the key features of an ideal physical activity assessment tool that should be used primary care settings?
    - [Prompt] What additional factors should be considered, or questions asked, to better understand a person's capability and motivation to engage in a physical activity intervention?
- What should we look for when comparing physical activity assessment tools? (e.g. how accurate they are, how easy and quick they are to use, if they work digitally, and if patients are comfortable with them)
    - [Prompt] How inclusive are alternative physical activity assessment tools for different groups of people?
- How do GPs judge whether a patient is ready, able, or motivated to take up a physical activity intervention?

Topic 3: What are the major gaps in the literature?

- What gaps are there in the literature?
- What databases, sources of evidence, or grey literature should use for our rapid review?
- Do you have suggestions for how we can synthesise evidence efficiently?

Topic 4: Moving Medicine

- How can we define 'effectiveness' for such a model?
- How do we know if it is fit for purpose?
- What are the criteria we need to consider?
- How widely is it used?
- Are there other models? How do they compare? (To what extent can we answer these questions through our rapid review.)

Appendix 2.

Table 1. Full search strategy for MEDLINE

1	"physical activity questionna*" or "physical activity screen*" or "physical activity assess*" or "physical activity measure*" or "activity screening tool*" or "exercise assess*" or ("physical activity" adj2 questionna*) or ("physical activity" adj assess*) or ("physical activity" adj2 "measure*") or ("physical activity" adj2 "tool*")	16,805
2	"General Practice Physical Activity Questionnaire" or "GPPAQ" or "Physical Activity Vital Sign" or "PAVS" or "Moving Medicine" or "International Physical Activity Questionnaire" or "IPAQ" or "Global Physical Activity Questionnaire" or "GPAQ" or "Physical Activity and Sedentary Behaviour Assessment Questionnaire" or "PASBAQ" or "Physical Activity Assessment Questionnaire" or "Exercise Vital Signs" or "EVS" or "Physical Activity Assessment Tool"	25,465
3	1 OR 2	37,366
4	"primary care" or "general practice" or "family practice"	257,021
5	"assessment" or " evaluation" or "feasibility" or "acceptability" or "usability" or "validit$ " or "implementation" or "strengthens" or "weakness" or "screening effectiveness" or "reliability" or "sensitivity" or "specificity" or "psychometr$" or "measurement accuracy" or "measurement error" or "measurement precision" or "measurement repeatability"	6,476,367
6	3 AND 4 AND 5	204

Appendix 3

Table 2. Reliability, Validity, and Diagnostic Accuracy of Physical Activity Assessment Tools

PA assessment tool	Reliability	Validity		Diagnostic test accuracy	
		Criterion	Other forms of validity	Truly active participants	Truly inactive participants
GPPAQ	**wK:** 0.57 to 0.74 [23, 45] **Cronbach's α:** 0.76 to 0.84 [24] **ICC** = 0.90 (0.82–0.95) [33]	**Underestimated** PA among older adults (wK: 0.24)[23] and often misclassified participants' activity levels compared with accelerometer data. **Rho**: 0.26 (95% CI: 0.12–0.39)[33]	**Construct validity:** **KMO**: 0.71 ($p < 0.001$)[24] **Factor loadings** = 0.6 to 0.8[24] **Concurrent validity:** **wK:** 0.24[23]	8.3% to 54.6% [23, 35, 38, 45]	85% to 97.4% [23, 35, 38, 45]
PAVS	NR	**K:** 0.46 (95% CI: 0.04–0.89)[25]	**Construct validity:** More accurate for structured, sustained periods of activity than with short, incidental movements.[26] **Concurrent validity with MAQ:** **K:** 0.55, ($P < 0.001$)[26] **r:** 0.71 ($P < 0.001$)[26]	NR	91%[25]

EVS	**ICC** = 0.98 ($p < .01$)[43]	**Underestimated** MVPA minutes/week by 24 minutes.[43] **Overestimated** MVPA per week by 66 min.[35] **Rho:** 0.21 to 0.38[37, 39]	**Classification validity:** **wK:** 0.29[39]	27% to 78%[35, 37, 39, 43]	56% to 89%[35, 37, 39, 43]
IPAQ-SF	**Pooled Rho:** 0.76 (95% CI: 0.73–0.77)[32]	**Underestimated** sedentary time and total physical activity compared with accelerometers, and showed **poor agreement** for MVPA and sedentary behaviour.[40] **Rho:** 0.30 (95% CI: 0.23–0.36)[32]	NR	NR	NR
2Q	**Rho for MPA/walking:** 0.42 (95% CI: 0.30–0.52)[44] **Rho for VPA:** 0.65 (95% CI: 0.57–0.72)[44] **Rho for total activity:** 0.61 (95% CI: 0.53–0.69)[44]	**Rho:** 0.39 (95% CI: 0.28–0.49)[44] **K:** 0.18 (95% CI: 0.04–0.33)[18]	**Concurrent validity:** **K:** 0.47 (95% CI: 0.36–0.58)[44] **Rho:** 0.54 (95% CI: 0.44–0.63)[44]	NR	NR
3Q	**Rho for MPA/walking:** 0.57 (95% CI: 0.47–0.66)[44]	**Rho:** 0.31 (95% CI: 0.18–0.43)[44] **K:** 0.24 (95% CI: 0.12–0.37)[44]	**Concurrent validity:** **K:** 0.43 (95% CI: 0.32–0.53)[44]	NR	NR

	Rho for VPA: 0.68 (95% CI: 0.60–0.75)[44] **Rho for total activity:** 0.63 (95% CI: 0.53–0.70)[44] **ICC** = 0.97 (0.94–0.98)[33]	**Rho:** 0.45 (95% CI: 0.30–0.61)[33]			
SBAS	NR	**Rho:** 0.10, (P = 0.59) at T1 and 0.28, (P = 0.15) at T2[37]	NR	18% at T1 and 67% at T2[37]	79% at T1 and 58% at T2[37]
BPAAT	**ICC**: 0.61–0.80[41] **Rho**: 0.59 to 0.84[41] **K:** 0.53 (95% CI: 0.33–0.72)[41]	**K:** 0.40 (95% CI: 0.12–0.69)[41]	NR	NR	NR

PA – Physical Activity, GPPAQ – General Practice Physical Activity Questionnaire, PAVS – Physical Activity Vital Sign, EVS – Exercise Vital Sign, IPAQ-SF – International Physical Activity Questionnaire-Short Form, 2Q / 3Q – Two-Question / Three-Question Physical Activity Tools, SBAS – Stanford Brief Activity Survey, BPAAT – Brief Physical Activity Assessment Tool, ICC – Intraclass Correlation Coefficient, K – Kappa Statistic, wK – Weighted Kappa Statistic, Rho – Spearman's Correlation Coefficient, r – Pearson Correlation Coefficient, KMO – Kaiser–Meyer–Olkin, MVPA – Moderate-to-Vigorous Physical Activity, VPA – Vigorous Physical Activity MPA – Moderate Physical Activity, MAQ – Modifiable Activity Questionnaire, CI – Confidence Interval, NR – Not Reported