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# Results from Shanghai's 2025 report card on physical activity for adults

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## Abstract

**Background**

Physical activity (PA) benefits health, yet systematic assessment of PA among Chinese adults is limited. This study presents the first Shanghai report card on PA for adults, providing baseline evidence for policy development and international comparison.

**Methods**

Data were derived from the 2025 National Fitness Activity Status Survey of 2,870 Shanghai residents (≥ 19 years), using stratified multi-stage probability sampling covering all 16 districts. Following the 2025 ParticipACTION framework, 17 indicators across four categories were graded.

**Results**

The grades of Shanghai 2025 report card were Moderate-to-Vigorous Physical Activity (MVPA, D+), Total Daily Steps (C-), Muscle-Strengthening Activities (F), Balance Activities (B-), Active Transportation (INC), Sport Participation (C-), Sleep (B-), Stationary Time (A-), Recreational Screen Time (C-), Perceived Capability (A), Perceived Opportunity (C-), Motivation (INC), Facilities and Infrastructure (B+), Programming (INC), Policies and Leadership (INC), Social Environment (INC), and Government (A-).

**Conclusion**

Generally, lower grades were assigned to behavior-related indicators (e.g., MVPA, muscle-strengthening activities, recreational screen time), whereas higher grades were observed for structural indicators related to infrastructure, perceived capability, and government strategies. These findings suggest that Shanghai has established robust policy supports and environmental assets, yet the translation of these investments into actual behavioral change among adults remains inadequate. Future efforts should prioritize closing the policy–practice gap through targeted interventions, expanding accessible PA opportunities, and strengthening data infrastructure, with particular attention to females. This Report Card provides a baseline for ongoing monitoring and cross-national comparison, and will guide future policy refinement and health promotion strategies in Shanghai.

**Clinical trial number**: not applicable.


## Introduction

Physical inactivity has emerged as a major modifiable risk factor for non-communicable diseases and poses a significant public health burden worldwide. The World Health Organization has consistently highlighted that insufficient physical activity contributes to increased risks of cardiovascular diseases, metabolic disorders, certain cancers, and mental health conditions. Regular surveillance of physical activity levels and their correlates is essential for designing evidence-based interventions and health policies.

Internationally, the ParticipACTION report card system has been widely adopted to monitor and benchmark physical activity across various populations.[1] This framework has been extended to multiple countries and regions, forming the Global Matrix that enables cross-country comparisons.[2, 3] In China, the China report card on physical activity for children and youth, led by the Active Healthy Kids China team, has been successfully released several times, providing valuable insights into the insufficient activity and high sedentary behaviour among Chinese children and adolescents.[4, 5]

In contrast, systematic and comprehensive evaluation of physical activity among Chinese adults remains underdeveloped. National surveys, such as the National Fitness Activity Status Survey, offer some descriptive data but are primarily focused on participation in fitness activities, lacking a multidimensional framework aligned with international standards. Moreover, these surveys are not routinely synthesized into a regular report card mechanism. Shanghai, as a highly urbanized megacity with a fast-paced lifestyle and high prevalence of sedentary occupations, presents unique challenges to adult physical activity.[6] Yet, no dedicated report card has ever been established to holistically assess the physical activity profile of Shanghai adults.

To address this gap, the present study reports the first Shanghai report card on physical activity for adults. It was developed by the research team from the Shanghai Research Institute of Sports Science, using data from the 2025 National Fitness Activity Status Survey. Following the indicator framework of the 2025 ParticipACTION report card on physical activity for adults, we evaluated multiple core indicators for Shanghai adults aged 19 years and older.[7] This study aims to establish baseline evidence on adult physical activity in Shanghai, inform future health promotion strategies, and facilitate international comparisons.

## Methods

This study represented the first report on the physical activity status of adults in Shanghai. The team consisted of nine researchers (three research fellows, two associate research fellows, and four assistant research fellows). Data were derived from participants in the 2025 National Fitness Activity Status Survey among Shanghai residents aged 19 years and older (≥ 19 years). A stratified, three-stage, probability proportional to size sampling method was employed. In accordance with national requirements, all 16 districts of Shanghai were included in the sampling frame. The survey was conducted through face-to-face interviews using a computer-assisted personal interviewing system during home visits. This study reports on community-dwelling, non-institutionalized adults aged 19 years and older residing in Shanghai. Findings may not be generalizable to institutionalized populations (e.g., nursing home residents, military personnel, incarcerated individuals) or non-household residents.

A total of 2,870 questionnaires were completed by Shanghai residents in 2025, with 1,243 males and 1,627 females. The questionnaire primarily covered daily physical activity, regular sports participation, life satisfaction, and sports consumption. The 2025 National Fitness Activity Status Survey was mainly focused on personal fitness assessment. Consequently, under the ParticipACTION framework, missing data occurred for active transportation, motivation, and the three sub-indicators under Spaces, Places and Cultural Norms. The indicator contents, evaluation criteria, and their rationale for the Shanghai report card on physical activity for adults are presented in Table 1.

Table 1
Indicators and benchmark of the 2025 Shanghai report card on physical activity for adults

| Categories | Indicators | Benchmark |
|---|---|---|
| Daily behaviours | Moderate-to-vigorous physical activity (MVPA) | The percentage of adults 19 years of age and older who meet the PA component of the Physical Activity Guidelines for the Chinese Population. (i.e., at least 150 minutes of weekly MVPA). |
| | Total daily steps | The percentage of adults 19 years of age and older living in Shanghai who take 6000 or more steps per day through a variety of light, moderate and vigorous activities that contribute to daily movement. |
| | Muscle-strengthening activities | The percentage of adults 19 years of age or older living in Shanghai who engage in muscle-strengthening activities using major muscle groups at least twice a week. |
| | Balance activities | The percentage of adults 60 years of age and older living in Shanghai who perform the closed-eye single-leg standing test was rated as good or higher during the National Physical Fitness Monitoring. |
| | Active transportation | The percentage of adults 19 years of age and older living in Shanghai who use active transportation to get to and from places (e.g., work, university/college, parks, malls, friends' homes). |
| | Sport participation | The proportion of Shanghai residents aged ≥ 19 years who achieved the recommended level of exercise (i.e., moderate-to-vigorous intensity for ≥ 30 minutes per session on ≥ 3 days per week). |
| | Sleep | The percentage of adults living in Shanghai who meet the sleep duration recommendations of seven to nine hours per day for those 19 to 64 years of age and seven to eight hours per day for those 65 years of age and older. |
| | Stationary time | The percentage of adults living in Shanghai who limit stationary time to 8 or fewer hours per day. |
| | Recreational screen time | The percentage of adults living in Shanghai who engage in no more than 3 hours of recreational screen time per day. |
| Individual characteristics | Perceived capability | The percentage of adults living in Shanghai who perceive themselves as physically able to engage in physical activity.<br><br>The percentage of adults who perceive themselves as psychologically able to engage in physical activity. |
| | Perceived opportunity | The percentage of adults living in Shanghai who agree or strongly agree that they have physical opportunity to participate in PA (e.g., perceived available opportunities in the community, a lack of barriers).<br><br>The percentage of adults who agree or strongly agree that they have social opportunities to participate in PA (e.g., perceived social support from peers, family). |
| | Motivation | The percentage of adults living in Shanghai who agree or strongly agree that they have the motivation (e.g., desire, interest or positive attitude) to participate in PA.<br><br>The percentage of adults who agree or strongly agree that they have the automatic motivation (e.g., habit) to participate in PA. |
| Spaces, places and cultural norms | Facilities and infrastructure | The percentage of adults living in Shanghai who has access to facilities or venues for physical activities within a 15-minute walking or cycling distance from their place of residence. |
| | Programming | The percentage of key settings (e.g., municipalities, workplaces, sport and recreation organizations, public health) that support programming for various populations. |
| | Policies and leadership | The percentage of key settings (e.g., municipalities, workplaces, sport and recreation organizations, public health) that have a formal strategy or plan for PA, sport, recreation or active transportation.<br><br>The percentage of key settings (e.g., municipalities, workplaces, sport and recreation organizations, public health) that are aware of/use PA guidelines and information. |
| | Social environment | The percentage of key settings (e.g., municipalities, workplaces, sport and recreation organizations, public health) that have sufficient staffing and human resources to fulfill each setting's mandate and vision in relation to PA/sport.<br><br>The percentage of key settings (e.g., municipalities, workplaces, sport and recreation organizations, public health) that support volunteers.<br><br>The percentage of key settings (e.g., municipalities, workplaces, sport and recreation organizations, public health) that have partnerships/collaborations for facilities or program delivery. |

| Categories | Indicators | Benchmark |
|---|---|---|
| Strategies and investments | Government | Demonstrated progress through the key stages of public policy-making (e.g., policy agenda, formation, implementation, evaluation and decisions about the future).<br><br>Evidence of leadership and commitment in promoting PA opportunities for adults of all ages and abilities.<br><br>Funds and resources are allocated for implementing PA promotion strategies and initiatives for adults of all ages, abilities and cultures.<br><br>Investments in professional organizations are made. |

For each indicator, prevalence estimates were calculated based on the proportion of participants meeting the predefined benchmark. When an indicator comprised multiple age groups, benchmarks, or sex strata, the overall prevalence was determined by calculating a simple or weighted average across all relevant subgroups, following the approach used in previous ParticipACTION report cards. Grades were assigned according to the standardized ParticipACTION grading rubric, where A + = 94–100%, A = 87–93%, A− = 80–86%, B + = 74–79%, B = 67–73%, B− = 60–66%, C + = 54–59%, C = 47–53%, C− = 40–46%, D + = 34–39%, D = 27–33%, D− = 20–26%, and F = 0–19%. Indicators with insufficient data were designated as INC (incomplete). Descriptive statistics were computed for each indicator overall and stratified by sex where applicable. Age and sex disparities were considered during grade assignment.

## Results

The Shanghai 2025 report card, based on the ParticipACTION report card on physical activity for adults, is an assessment of physical activity among adults in Shanghai. The grades of 17 indicators were summarized in Table 2, and the grades of indicators by sex were summarized in Table 3.

Table 2
Grades assigned to indicators in Shanghai 2025 report card on physical activity for adults

| Indicator | Grades |
|---|---|
| Moderate-to-vigorous physical activity (MVPA) | D+ |
| Total daily steps | C- |
| Muscle-strengthening activities | F |
| Balance activities | B- |
| Active transportation | INC |
| Sport participation | C- |
| Sleep | B- |
| Stationary time | A- |
| Recreational screen time | C- |
| Perceived capability | A |
| Perceived opportunity | C- |
| Motivation | INC |
| Facilities and infrastructure | B+ |
| Programming | INC |
| Policies and leadership | INC |
| Social environment | INC |
| Government | A- |

Note. The grade for each indicator is based on the percentage of adults meeting a defined benchmark: A + is 94%-100%; A is 87%-93%; A- is 80%-86%; B + is 74%-79%; B is 67%-73%; B- is 60%-66%; C + is 54%-59%, C is 47%-53%; C- is 40%-46%; D + is 34%-39%; D is 27%-33%; D- is 20%-26%; F is < 20%; INC is Incomplete data.

Table 3
Grades assigned to indicators by sex in Shanghai 2025 report card on physical activity for adults

| Indicator | Male | | Female | |
|---|---|---|---|---|
| | % | Grades | % | Grades |
| Moderate-to-vigorous physical activity (MVPA) | 37.7 | D+ | 31.8 | D |
| Total daily steps | 46.7 | C- | 43.5 | C- |
| Muscle-strengthening activities | 24.9 | D- | 10.6 | F |
| Balance activities | 61.6 | B- | 59.2 | C+ |
| Sport participation | 43.0 | C- | 43.1 | C- |
| Sleep | 63.8 | B- | 60.4 | B- |
| Stationary time | 81.1 | A- | 80.5 | A- |
| Recreational screen time | 44.7 | C- | 43.5 | C- |
| Perceived capability | 90.7 | A | 90.7 | A |
| Perceived opportunity | 47.2 | C | 46.3 | C- |
| Facilities and infrastructure | 80.0 | A- | 78.5 | B+ |

## Discussion

# Moderate-to-vigorous physical activity: D+

Based on evidence-based public health recommendations that adults aged 18–64 years should accumulate at least 150–300 minutes of moderate-intensity or 75–150 minutes of vigorous-intensity aerobic physical activity per week, or an equivalent combination thereof.[8] only 34.4% of adults in Shanghai met the guidelines, resulting in a grade of D + for moderate-to-vigorous physical activity (MVPA). Males were more active (37.7%) than females (31.8%). It was slightly lower than the grade of C- reported in the 2025 Canadian ParticipACTION Report Card, indicating that Shanghai residents need to further increase their MVPA participation. Furthermore, the findings underscore the importance of emphasizing exercise intensity when providing guidance on scientific fitness.

## Total daily steps: C-

The Dietary Guidelines for Chinese Residents (2022) explicitly recommend that adults engage in physical activity equivalent to at least 6,000 steps of brisk walking per day. Notably, this 6000-step target refers specifically to leisure-time physical activity undertaken for health purposes, as distinct from activities performed during work, daily commuting, or domestic chores. [9] To estimate daily step counts from self-reported walking time, we applied a cadence threshold of 70 steps per minute, [10] 44.9% of Shanghai adults met the criterion, corresponding to a grade of C−. The proportion was slightly higher in males (46.7%) than in females (43.5%), though both sexes received the same grade of C−. This performance exceeded the D grade reported for Canada in the 2025 ParticipACTION report card on physical activity for adults.

## Muscle-strengthening activities: F

A growing number of international organizations, national guidelines, and academic institutions recommend that adults engage in muscle-strengthening activities at least two days per week. Notably, the American College of Sports Medicine issued its updated position stand on resistance training in 2026, marking the first such revision in over a decade. [11] Our results showed that the grade for resistance training among males (D-) was higher than that among females (F); however, the overall grade for muscle-strengthening activities among Shanghai residents was F, with only 16.8% meeting the recommended guidelines, which was substantially lower than the D+ reported in the 2025 Canadian ParticipACTION report card. These findings highlight the critical imperative for Shanghai residents and, by extension, the broader Chinese population, to substantially increase their participation in resistance training, thereby maximizing health benefits.

# Balance activities: B-

Physical activity supports balance capacity throughout life. [12] The sixth Shanghai National Physical Fitness Monitoring demonstrated progressive age-related declines in balance performance across all age groups. For example, in the closed-eye single-leg stance test, mean

balance time for males fell from 30.9 s (20–24 yrs) to 17.7 s (45–59 yrs) and 9.77 s (≥ 65 yrs); for females, the corresponding values were 30.9 s, 19.7 s, and 10.5 s, respectively. Based on the National Physical Fitness Assessment Standard (2023), 60.36% of participants achieved a rating of "good" or above, yielding an overall grade of B−. Males (61.6%, B−) outperformed females (59.2%, C+), highlighting the need for enhanced balance training in women. This indicator is not comparable with the 2025 Canadian ParticipACTION report card owing to differing assessment criteria.

### Active transportation: INC

Active Transportation, human-powered commuting modes such as walking, cycling, and wheeling, promotes health by increasing total physical activity, improving cardiorespiratory and metabolic function, reducing chronic disease risk, and enhancing mental well-being. [13, 14] No data on active transportation were available from the present survey or the physical fitness monitoring.

### Sport participation: C-

In the Chinese context, sport participation is operationalized as the sport population, defined as individuals who engage in physical activity at least three times per week, for a minimum of 30 minutes per session, at moderate intensity or above. [15] Based on this criterion, 43.1% of the surveyed population met the standard, yielding a grade of C−. This figure compares favorably with the D grade reported in the 2025 Canadian ParticipACTION report card, while no sex-based disparity was observed (males: 43.0%; females: 43.1%). Notably, this performance aligns closely with the 2025 target set by the outline for developing Shanghai as a world-known sports city. [16]

## Sleep: B-

According to the National Sleep Foundation, adults aged 18–64 years are recommended to obtain 7–9 hours of sleep per night, while those aged ≥ 65 years are advised 7–8 hours. [17, 18] In Shanghai, the average sleep duration was 7.1 hours for adults aged 18–64 years and 7.2 hours for those aged 65–79 years. Our results showed that 61.8% of Shanghai adults met the sleep recommendations, with comparable rates for males (63.8%) and females (60.4%), all corresponding to a grade of B−. This grade was slightly lower than the B grade reported for Canada.

## Stationary time: A-

Sedentary behavior is detrimental to physical fitness, with sitting time and screen time serving as key indicators. Applying the cut-off ≤ 8 hours of daily sitting time proposed by Ross et al. [19], the present results showed that Shanghai adults received a grade of A- for stationary time, with identical grades for both males and females. This grade was substantially higher than the C- reported in the 2025 Canadian ParticipACTION report card, indicating that Shanghai adults exhibited better stationary time than their Canadian counterparts.

## Recreational screen time: C-

Recreational screen time, a new indicator introduced in the 2025 ParticipACTION report card [7] relative to the 2019 edition [1], was assessed by the proportion of adults with daily recreational screen time ≤ 3 hours. [19, 20] In Shanghai, 44% met this benchmark, with comparable rates between sexes (44.7% for males *vs*. 43.5% for females). This performance was lower than the C+ grade reported for Canada in the 2025 report.

## Perceived capability: A

The percentage of adults who perceive themselves as physically able to engage in physical activity with self-assessed fitness level of “fair” or higher, and the percentage of adults who perceive themselves as psychologically able to engage in physical activity with stress frequency rated as “occasionally,” “seldom,” or “never”. A composite score was calculated as the average of the physical and psychological sub-scores; those scoring above the threshold were classified as having adequate Perceived Capability. The results showed that Shanghai residents received a grade of A for Perceived Capability, and the grades for males and females were identical. This indicates that Shanghai residents exhibited a relatively high level of perceived capability with regarded to physical activity.

## Perceived opportunity: C-

Perceived opportunity was assessed using two criteria: the percentage of adults agreeing or strongly agreeing that they have physical opportunities to participate in PA, and the percentage agreeing or strongly agreeing that they have social opportunities, corresponding to the survey items “sport organizations” and “grassroots sports events and activities,” respectively. Based on participation rates of 45.5% and 47.7%, a grade of C- was assigned. Males received a slightly higher grade than females, suggesting that the Shanghai sports authorities should strengthen perceived opportunity, particularly among female residents.

## Motivation: INC

Motivation, defined in Table 1 as agreement to reflective (e.g., desire) and automatic (e.g., habit) drivers for physical activity, was graded incomplete (INC) owing to missing data. We therefore recommend incorporating motivation items into future routine surveys. Dunn et al [21] reported that motivation was correlated with physical activity levels in female users of the ParticipACTION mobile application.

## Facilities and infrastructure: B+

The 15-minute fitness circle represents a national strategic initiative designed to enhance the public service system for nationwide fitness. Perceived accessibility to this fitness circle has been shown to exert a significant positive effect on residents' physical activity levels.[22] In Shanghai, 67.4% of residents could access sports facilities within a 15-minute walk, while 79.2% could do so within a 15-minute cycle. Based on the cycling-access proportion, the grade for facilities and infrastructure was determined as B+, which is consistent with the rating in the 2025 Canadian ParticipACTION report card. For comparison, the walking-access proportion was 67.4%, which would correspond to a lower grade, highlighting the importance of considering multiple modes of access when evaluating facility reach. Furthermore, the percentage for males (80.0%) was marginally higher than for females (78.5%), which may be attributable to sex-specific factors.

## Programming: INC

Programming was graded INC due to limited data on support across key settings (municipalities, workplaces, sport/recreation organizations, public health) for diverse populations. [23] However, official sources confirm Shanghai's ongoing efforts in community sports life circles, all-age health hubs, and sport-medicine integration—notably, the Yangpu District community health coach program has proven successful. These initiatives suggest that future routine monitoring could provide sufficient data for a valid grade.

## Policies and leadership: INC

Policies and Leadership received INC due to no data. However, Shanghai has established a clear implementation framework via the Sports Development Regulations, the Three-Year Action Plan for Sport-Promoted Health (2024–2026), and the 2025 National Fitness Work Priorities. Guideline dissemination has been operationalized through outreach, training, and standardization, ensuring science-based guidance reaches diverse settings.

## Social environment: INC

Despite lacking survey data for the social environment indicator, Shanghai has developed systematic practices in human resources, volunteer support, and partnerships. Human resources are anchored by a core workforce of social sports instructors covering all key settings. Volunteer support follows a government-led, professionally-supported, and socially-participatory model. Partnerships utilize multi-dimensional collaboration (e.g., government-enterprise, cross-sectoral, school-community) to integrate resources and advance nationwide fitness.

## Government: A-

Shanghai has made substantial progress in public policy-making for nationwide fitness. A full policy cycle has been established, supported by legislative instruments such as the Shanghai Sports Development Regulations and the Shanghai National Fitness Implementation Plan, along with systematic evaluation and adaptive adjustment mechanisms. Leadership commitment is evidenced by the integration of fitness programs into municipal livelihood projects and the assignment of dedicated agencies and clear strategic objectives by the Municipal Sports Bureau. Funding is secured through multiple channels, including fiscal appropriations and sports lottery proceeds, ensuring stable investment across districts. Professional capacity has been strengthened via subsidies for sports social organizations, support for community bases, and training of social sports instructors. Per capita sports facility area has reached 2.65 m². However, challenges remain, notably inter-district disparities and insufficient cross-sectoral coordination. Accordingly, the overall government performance is graded as A-.

## Strengths and limitations

This first Shanghai Report Card on Physical Activity for Adults provides a comprehensive, multidimensional assessment using the internationally recognized ParticipACTION framework. Grades were derived from the 2025 National Fitness Activity Status Survey, which ensured a representative sample of the adult population. The evaluation covered multiple domains—daily behaviours, individual characteristics, settings/influences, and government strategies, offering a holistic view of the physical activity landscape.

Several limitations exist. First, missing data for indicators such as Active Transportation, Motivation, Programming, Policies/Leadership, and Social Environment led to incomplete grades. Second, the survey was originally designed for personal fitness assessment, not the ParticipACTION framework, causing coverage mismatches. Third, self-reported measures may introduce recall and social desirability biases. Fourth, the balance indicator was not comparable with the Canadian Report Card due to differing assessment criteria, limiting cross-country comparisons.

## Conclusion

Despite strong policy support and infrastructure for physical activity promotion in Shanghai, the translation of these investments into behavioural change among adults has been insufficient. To enhance population-level physical activity, future initiatives should focus on: (1) expanding opportunities for moderate-to-vigorous physical activity and resistance training, particularly for females; (2) improving surveillance systems to routinely capture currently missing indicators; and (3) implementing targeted interventions to close the policy–practice gap. This Report Card provides a baseline for ongoing monitoring and cross-national comparisons, and will inform future policy formulation and health promotion strategies in Shanghai.

## Declarations

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**Ethics approval and consent to participate**

Informed consent was obtained from all individual participants included in the study. All participants provided written informed consent prior to interviews commencing and data collection. This study was conducted in accordance with the Declaration of Helsinki. The research protocol was approved by the Ethics Committee of Shanghai Research Institute of Sports Science (No. LLSC20230017).

**Consent for publication**

Not applicable.

**Competing interests**

The authors declare no competing interests.

**Availability of data and materials**

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

**Author contributions**

Honggang Yin, Jun Qiu and Chen Wang co-led the Shanghai Report Card synthesis, coordinated grading decisions, and co-drafted the first manuscript version. Jun Qiu also led evidence identification and rubric scoring for the Government indicator. Honggang Yin led evidence extraction for Moderate-to-Vigorous Physical Activity and Total Daily Steps, with Defeng Zhao assisting. Defeng Zhao led evidence extraction for Muscle-Strengthening Activities and Balance Activities. Jingjing Wang led evidence extraction for Active Transportation and Sport Participation. Dao Wang led evidence extraction for Sleep and Stationary Time. Fanhui Zheng led evidence extraction for Recreational Screen Time and Perceived Capability. Ying Chen led evidence extraction for Perceived Opportunity and Facilities and Infrastructure. Jintao Hong and Bo Zhai participated in evidence consolidation and manuscript review, and assisted with evidence collation for Programming, Policies and Leadership, and Social Environment. All authors reviewed, revised, and approved the final manuscript.

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