Prevalence of physical inactivity in Iran: a systematic review

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Introduction
Insufficient physical activity (PA) considered as one of the top 10 leading causes for premature death worldwide.³ It is estimated that at least 3.2 million deaths/year are attributable to insufficient PA.¹ According to the World Health Organization (WHO) estimations, lack of PA contributes to approximately 17% of diabetes and heart disease, 12% of falls accidents in the elderly, and 10% of breast cancers and colon cancers.¹ Scientific evidence reveals that regular PA is one of the most important preventive factors for chronic diseases, including cardiovascular disease, cancer, and stroke. This

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This estimation among US adults was estimated with a wide range of different related multidisciplinary fields, there is an evident gap in papers and published data. Other relevant studies show different but lower estimation of prevalence of PA. After multivariate analyses estimation of physical inactivity in adult southern Brazilian population, was 41.1%. Available data from a small number of studies suggests a high prevalence of 43.3%–99.5% physical inactivity among Saudi children and adults alike. This estimation among US adults was 23%, with more women (28%) than men (17%). There are also some evidences on high estimation in Canada. The worldwide prevalence of physical inactivity estimated as 21.4% (95% CI: 18.4–24.3), being higher among women (mean = 23.7%, 95% CI: 20.4–27.1) than men (mean = 18.9%, 95% CI: 16.2–21.7). Depending on how PA measure, the results of prevalence are different. On the other hand, considering the quality of data presentation in published papers it is noticeable that because of quality of reporting, most of them cannot share their findings.

Discussion

In our study, from total of 245 searched papers, 34 studies were eligible for inclusion. Our findings provide evidence-based data for better insight for relevant stakeholders. From total 34 included studies, 8 studies were based on individual data and other 26 studies were designed and conducted as national or sub-national surveys. Nine trials were at the national level, 20 studies were at provincial level, 2 surveys at regional level and 3 investigations were assigned to local areas. Six papers did not refer to the year that studies have been run during that. Considering the age ranges of participants; 10 studies covered the age categories of adolescents and youth and other studies focused only on adult target groups. There was a considerable disparity on measurement criteria or tools for physical inactivity. Such a disparity in measurement criteria led to uncooperative results that could not aggregate as deductive evidence gap. Global physical activity questionnaire (GPAQ) and Baekke questionnaire were used as the most popular tools. This is also mentionable that in 16 study results were presented separately for two sexes. The estimations for inactivity with a wide range from near to 30% up to about 70% had considerable variation between sexes and studied sub-groups.

Assessment of health related indicators as well as the estimates of their levels and effects are the most essential requisites for evidence-based health policies. PA has several physical, psychological and social benefits for all age groups and scientific evidences support of its preventive role for a wide range of physical and mental health problems.

Based on our experience despite of priority of problem and wide range of different related multidisciplinary fields, there is an evident gap in papers and published data. Other relevant studies show different but lower estimation of prevalence of PA. After multivariate analyses estimation of physical inactivity in adult southern Brazilian population, was 41.1%. Available data from a small number of studies suggests a high prevalence of 43.3%–99.5% physical inactivity among Saudi children and adults alike. This estimation among US adults was 23%, with more women (28%) than men (17%). There are also some evidences on high estimation in Canada. The worldwide prevalence of physical inactivity estimated as 21.4% (95% CI: 18.4–24.3), being higher among women (mean = 23.7%, 95% CI: 20.4–27.1) than men (mean = 18.9%, 95% CI: 16.2–21.7). Depending on how PA measure, the results of prevalence are different. On the other hand, considering the quality of data presentation in published papers it is noticeable that because of quality of reporting, most of them cannot share their findings.
Results of present systematic review showed that prevalence of physical inactivity is high in Iran. Our findings also reveal a heterogeneity in reported values due to diversity in study design, measurement tools, target groups and sub-population sampling. The findings of present study regarding heterogeneity of study design, tools of data collection and study population support future efforts to improve data collection and assessment of PA using a standardized assessment tools such as GPAQ or BRFSS at national and provincial level to provide the possibility of meta-analysis of data for a comprehensive and accurate inference about level of PA in Iran at national and subnational level.

Ethical approval
Present study was approved by the ethical committee of Tehran University of Medical Science. All of included studies in our review would be cited in all reports and all publications of our study. Whenever we needed more information about a certain study, for obtaining required information, we contacted the corresponding author.

Competing interests
The authors declare that they have no competing interests.

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Supplementary Files
Supplementary file 1 contains Table S1.

References


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