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PROBLEMS OF BUILDING A SYSTEM FOR MONITORING THE PHYSICAL CONDITION OF DIFFERENT POPULATION GROUPS

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Abstract
Monitoring the physical condition of the population is necessary for the prevention and promotion of health through physical culture, and its widespread implementation requires methodological, organizational, economic and information support. The difficulty of resolving this issue is associated with a number of problems - the lack of a concept for the content and economic justification of the monitoring system; differences in the physical condition of different population groups; the emergence of new works that expand the capabilities of the survey. This paper discusses methods for monitoring the physical condition of a person and suggests options for improving the existing system.

Keywords: physical activity, physical condition monitoring, population groups.

Introduction

Physical fitness includes physical activity and physical fitness. Physical fitness and physical activity should be considered different but complementary aspects of physical fitness. While physical activity is an important factor in determining fitness, genetics plays an even more important role. However, genetics may be more important in determining a person's highest level of fitness and less important in determining the fitness of a sedentary person (eg, overweight), and bed rest can significantly reduce fitness regardless of genotype

The purpose of this article is to evaluate current methods for monitoring physical health in different populations and recommend further steps to improve such measurements to improve our understanding of population-level physical health outcomes. Physical activity is defined as any body movement produced by skeletal muscle contraction that significantly increases energy expenditure. Physical activity is the only portion of total energy expenditure that can vary significantly between individuals, from less than 10% in sedentary individuals to more than 80% in extremely active individuals. Physical activity is defined by duration, frequency, intensity and type and depends on various areas such as work, transport, housekeeping and gardening, sports and exercise, and general leisure time. The most commonly assessed areas of physical activity are work and leisure and commuting.

Instruments for measuring physical activity must be valid and reliable, and suitable for use in large populations. Any proposed instrument should first be tested against the gold standard or,

less optimally, assessed against other instruments thought to be related to physical activity (eg, fitness test, metabolic parameters).

Pedometers. Pedometers are easy to install and wear, and are an inexpensive means of counting steps. There are a large number of pedometers on the market, and some models may be more reliable than others at counting steps in different conditions. Pedometers greatly underestimate physical activity as an energy expenditure, even in studies where cycling is not part of the physical activity, but they are suitable for monitoring campaigns and other interaction-based changes over time.

Heart rate monitoring. Heart rate monitoring is based on the assumption of a linear relationship between heart rate and oxygen consumption during moderate to vigorous activity. At rest and during low-intensity activities, the relationship is not linear and depends on mood, temperature and diet. Heart rate depends on a person's fitness, and a reliable estimate depends on individual calibration based on knowledge of maximum and resting heart rates, or better yet, direct measurement of oxygen consumption.

Accelerometers. Accelerometers measure movements in one, two, or three planes using various transducers and microprocessors. The devices are small and easy to carry, and the units of measurement (counts per minute) quantify the magnitude and direction of accelerations. New models are equipped with memory that can store data for every minute or every 10 seconds, allowing you to analyze short bursts of activity. In addition, data can be stored for up to 200 days. There are problems associated with the use of accelerometers. The output signal is frequency dependent due to an electronic filter that is used to filter out noise. This is of particular importance for children, whose step frequency depends on the child's age, which creates some difficulties when comparing the activity of different age groups. Another downside is that the accelerometer's power levels off as speed increases above 10 km/h. However, the time spent running at speeds greater than 10 km/h is limited during normal physical activity, and this problem is not as significant in epidemiological studies. Moreover, accelerometers cannot record physical activities without acceleration, such as rowing, cycling, skating and hill climbing. Accelerometers also cannot record isometric muscle contraction during muscular work under external force, such as lifting, carrying, and pushing. Cycling is a quantitative issue in some countries. The problem of converting counts per minute into energy consumption has not yet been resolved, since different activities with the same energy consumption display different results on the monitor.

To determine the physical fitness of large populations, it is recommended to measure several components: physical activity, cardiorespiratory fitness, muscle strength and muscle endurance [3]. They represent fundamentally different aspects of physical health, but to study the development and monitor the physical condition of the population it is necessary to measure all aspects in detail. Self-report measures of physical activity may be biased and misclassified, but we can only obtain information about areas of physical activity through questionnaires or interviews. In addition, only self-report is appropriate when physical performance is required over an extended period.

In this regard, there is a need for questionnaires that have been tested and well validated and allow international comparisons between different study populations. Objective measures

provide accurate and valid estimates, but they tend to vary widely across different populations. Therefore, there continues to be a need to develop objective methods that are more reliable and easier to administer in large study groups. A combined heart rate and accelerometer method appears promising.

REFERENCES

1. Muxammadievich, J. A. (2019). Historical basis of peacemaking ideas. South Asian Journal of Marketing & Management Research, 9(2), 44-48.
2. Muhammadievich, J. A. (2023). THE MORAL SIGNIFICANCE AND SOCIAL NECESSITY OF PEACEMANSHIP. Web of Discoveries: Journal of Analysis and Inventions, 1(8), 27-35.
3. Жўраев, А. (2020). Тинчликпарварлик – маънавий юксалиш жараёнининг юксак қадрияти. ilm sarchashmalari, 1(1), 32-35.
4. Жураев, А. (2019). Физическая культура и спорт как инструмент патриотического, миротворческого и духовно-нравственного воспитания молодежи. конференции, 1(1), 246-247.
5. Жураев, А. (2019). Ўзбекистонда барқарор тараққиётнинг тинчликпарварлик тамойили билан узвийлиги. НамДУ илмий ахборотномаси, 7-son, 143-148.
6. Жураев, А. (2019). Ўзбекистонда барқарор тараққиётнинг тинчликпарварлик тамойили билан узвийлиги. НамДУ илмий ахборотномаси, 7-son, 143-148.
7. To'lqin qizi Hamroyeva, J. (2023). O'ZBEK TILIDAGI MURAKKAB TARKIBLI AYRIM AFFIKSLARNING TABIATI XUSUSIDA. INNOVATIVE DEVELOPMENT IN THE GLOBAL SCIENCE, 2(5), 42-49.
8. Асадов, Т. Х. (2022). O'ZBEK TILIDA SO'Z YASALISHI TADQIQI VA RIVOJI XUSUSIDA. МЕЖДУНАРОДНЫЙ ЖУРНАЛ ИСКУССТВО СЛОВА, 5(2).
9. Асадов, Т. (2021). ХАРАКТЕРИСТИКА АФФИКСОВ-ча/-ларча/часига,-ан,-она ВЫРАЖАЮЩИЙ ЗНАК. ЦЕНТР НАУЧНЫХ ПУБЛИКАЦИЙ (buxdu. uz), 6(6).
10. Hamroyevich, A. T., & Qizi, Y. U. I. (2021). Natural characteristics of expressing sign affixes.
11. Hamroyevich, A. T. L. (2021). Muallif nutqi metaforalarining yuzaga kelish asoslari xususida: Asadov To 'lqin Hamroyevich Buxoro davlat universiteti o 'zbek tilshunosligi kafedrasi dotsenti, ffn. In Научно-практическая конференция.
12. Hamroyevich, T. A. WORDS ABOUT WORDS.
13. Xaytmirzayevna, M. D., & Jasurbek, E. (2022). Acmelological approach to preparation of future teachers. Web of scientist: International Scientific Research Journal, 3(4).
14. Khaitmirzayevna, M. D. (2024). Pedagogical ways of cognitive competences in future teachers based on acmeological approach. World Economics and Finance Bulletin, 32, 146-148.
15. Maxmudova, D. X. (2023). Kognitiv kompetentlikni rivojlantirishning akmeologik texnologiyasini joriy etish shart-sharoitlari. GOLDEN BRAIN, 1(34), 19-24.
16. Normatova, A. (2024). Five ways to build intercultural competence and confidence in your classroom. Educational Research in Universal Sciences, 3(4 SPECIAL), 512-514.

17. Normatova, A. (2023). The importance of preparation of english language teachers for distance education in uzbek society. Journal of language and linguistics, 6(5), 105-110.
18. Normatova, A. (2023). Implementations and challenges in organizing distance learning. PEDAGOG, 6(12), 174-179.
19. Normatova, A. (2023). Interactive activities and effective methods of distance learning in language teaching. Innovative Development in Educational Activities, 2(23), 201-205.
20. Sirojiddinovna, H. D. (2023). Scientific-theoretical foundations of the formation of students'independent learning skills based on the" case-study" approach in teaching english. Galaxy International Interdisciplinary Research Journal, 11(11), 638-645.
21. Sirojiddinovna, H. D. (2024). The improvement of language skills (speaking, listening, reading, and writing) for self-directed learners. Новости образования: исследование в XXI веке, 2(19), 231-236.
22. Sirojiddinovna, H. D. (2024). Inquiry-based learning: exploring methods that encourage students to ask questions and actively seek answers. So ‘ngi ilmiy tadqiqotlar nazariyasi, 7(1), 143-148.
23. Астанова, Г. А. (2022). Миср ҳикоятларида шарқона менталитет. Международный журнал искусство слова, 5(5).
24. Astanova, G. A. (2020). A masterpiece of Arabian tales and world literature. Theoretical & Applied Science, (3), 352-356.
25. Ibragimovna, T. G., Aminovna, A. G., Kadirovna, R. N., & Yusupovna, K. M. (2019). Artistic Expressions of a Situational Pragmatic System. International Journal of Recent Technology and Engineering, 8(3), 4591-4593.
26. Astanova, G. A. (2020). Historical truth in the images of women in Shakhrizad stories. Scientific reports of Bukhara State University, 4(1), 204-207.
27. Aminovna, A. G., & Ozjan, A. O. (2023). Hindi spirit in the tales of one thousand nights. Journal of education, ethics and value, 2(4), 47-49.
28. Aminovna, A. G. (2023). Maysara's work" and" a thousand and one nights. innovation in the modern education system, 3(26), 73-76.
29. Aminovna, A. G. (2022, September). " A thousand and one nights" and european literature. In E Conference Zone (pp. 104-107).
30. Aminovna, A. G. (2022). " A thousand and one nights" and Uzbek classic literature. 湖南大学学报 (自然科学版), 49(09).
31. Aminovna, A. G. (2021). Ethno-cultural issues in “thousand and one nights”. Conferencious Online, 84-85.
32. Астанова, Г. А. (2021). “Минг бир кеча” асаридаги аёллар образида тадбиркорлик ва қаҳрамонлик хусусиятларининг бадиий талқини. международный журнал искусство слова, 4(4).