Promotion of physical activity and public policies to tackle inequalities: considerations based on the Inverse Care Law and Inverse Equity Hypothesis

Promoção de atividade física e as políticas públicas no combate às desigualdades: reflexões a partir da Lei dos Cuidados Inversos e Hipótese da Equidade Inversa

Promoción de la actividad física y políticas públicas en la lucha contra las desigualdades: reflexiones a partir de la Ley de Cuidados Inversos y la Hipótesis de la Equidad Inversa

Abstract

This Essay reflects on some current approaches to the promotion of physical activity, proposing greater visibility for leisure-time physical activities and inequalities in access to them. The current scenario of increasing inequalities and the importance of confronting them, highlighting the pertinence of public policies, is presented and discussed in light of two theories, the Inverse Equity Hypothesis and the Inverse Care Law. The Inverse Equity Hypothesis seeks to understand how inequalities tend to be established in health indicators, based on an expected increase in inequalities when health innovations initially reach the more socially and economically privileged groups. Meanwhile, the Inverse Care Law emphasizes that the availability of adequate healthcare tends to vary inversely to the population’s need. By relating the theories and the promotion of leisure-time physical activity, the essay defends the expansion of public policies aimed at not further increasing inequalities. Public policies and their association with Brazilian Unified National Health System (SUS) and its principles should be the priority. The essay thus defends approaches to promote socially contextualized leisure-time physical activities, capable of prioritizing the groups that need them the most.

Inequality; Leisure Activities; Motor Activity

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Preliminary rites

Physical activity with its widely diverse manifestations has been acknowledged as an important factor for individual and population health. Meanwhile, despite important strides, many populations have not been ensured full access to physical exercise according to their interests or wishes, defined here as leisure-time physical activities (or those practiced during free time). The essay thus proposes to reflect on some current approaches to the promotion of physical activity. For the purposes of this essay, promotion occurs both in discourses and practices, especially an appeal using political, scientific, and media channels, prioritizing the idea that people should practice physical activity, whether at work, at home, during leisure time, and commuting, regardless of the specificities of these contexts. The hypothesis defended throughout the essay is to lend visibility to the promotion of leisure-time physical activities, seeking to introduce and discuss: (a) this domain’s prioritization and the current scenario of growing inequalities in leisure-time physical activity; (b) the ethical and practical reasons to tackle these inequalities, in light of two theories: the Inverse Care Law and the Inverse Equity Hypothesis; and (c) the pertinence of public policies in this context.

The promotion of physical activity in its different manifestations

From a contemporary scientific and Western historical perspective, the first evidence of health benefits from physical activity were presented in the pioneering study by Morris et al., analyzing cardiovascular mortality rates in bus drivers and ticket-takers in London (UK). The study defined physical activity according to the criteria proposed by Caspersen et al. as any body movement with energy expenditure that exceeds resting levels. Later, physical activity’s status as relevant for public health drew on evidence of its health benefits by addressing such activity in terms of domains, especially leisure-time and commuting.

Thus, given the approaches to the promotion of physical activity, we feel that it is important to reflect on a possible paradox. Despite evidence of the health benefits from the different physical activities mentioned above, in the current context, in light of social determinants of health and Brazil’s reality with large and persistent inequalities – does it truly make sense to promote physical activity, considering all of its manifestations, including all the types and domains? If the answer is affirmative, according to traditional approaches to physical activity and health in Brazil and the world, the next question should be to weigh the effectiveness of promoting physical activity in all domains, from a population-based perspective.

Many familiar approaches (in both private and public campaigns) to the promotion of physical activity launch messages to the population suggesting any and all body movements, regardless of the life context, domain, and individual characteristics, on the reasoning that such movements have beneficial health effects in an exclusively biological relationship. Examples include the promotion of physical activity in the workplace, in household chores, and sometimes also in transportation, such as suggesting that commuters get off the bus several stops ahead or prefer stairways to escalators and elevators. Without ruling out the potential physiological benefit of such practices for some health outcomes, the main concern relates to the effectiveness of implementing and maintaining such activities if individuals’ culture and social reality are not taken into account. The initial issue here is whether we should promote physical activity in public health initiatives, addressing it as any and all body movement. Are individuals in low- and middle-income countries able to adhere to such recommendations when they are exposed to long workdays and unsafe neighborhoods with limited health-friendly characteristics? Are we seeking this kind of promotion of physical activity? Is it socially contextualized in the Brazilian context? This generic approach is what we are trying to avoid in this essay, seeking to situate the debate on the promotion of physical activity in the social conditions, cultures, and respect for populations’ interests, especially considering Brazil’s unequally constituted conditions.

Recent Brazilian and international studies have shown that there has been limited progress in increasing the populations’ levels of physical activity, despite progress in knowledge in this area. Such evidence also leads us to reflect on the predominant approach to physical activity, disconnected
from the type and context of practice. The defense of any kind of body movement is influenced by a biomedical conception that is also responsible for a simplification of decision-making on individual and collective practice of physical activities and thus a wager on a risk-based discourse. Consistent with this perspective, the burden on individuals is not limited to the practice of physical activity, but includes other health behaviors such as inadequate diet, stress control, sleep, oral healthcare, and excessive alcohol and tobacco consumption, as well as the emerging sedentary behavior, among many other factors. The current context is one of an epidemic of chronic non-communicable diseases (NCDs), but also of an epidemic of risk factors, in which individuals are invariably surveilled and held accountable for any and all decisions on their habits and the consequences.

The demand for a more socially contextualized promotion of physical activity thus emerges in this scenario. Such contextualization includes the promotion of active commuting, but without the illusion that the option for cycling will not involve such pragmatic and definitive issues as cost, safety, distance, and time. However, the domain that best contemplates the potentially contextualized approach to the promotion of physical activity, and which we defend here, is the leisure-time domain. For some time, the conceptual basis (mainly associated with Physical Education) situated in physical activity practices has contended that the activities that should interest us in this context are those that we are defining here as leisure-time activities. The others, cited above, have other objectives such as housework or paid work and are not associated with the learning, experiences, tastes, and meanings associated with human movement. A recent United Nations report describes physical activity as an essential aspect of human development and an inalienable right, as long as valued by people and with the debate on the leisure-time setting as the point of departure. Thus, physical activities are seen as having the potential to contribute to a healthy life and can enrich people’s lives beyond work hours and the world of work. This essay is obviously not going to dwell at length on these theoretical and methodological aspects, but the differences lie in the culturalist and biologist approaches, limited dialogue or mutual acknowledgement by academic peers, and fragmentation in the development of knowledge and support for public policies in the fields that study physical activities and exercises. Unfortunately, physical activity has apparently been promoted more from the biological perspective, and again, one of the expressions of this dominance has been the attempt to induce people to engage in any kind of physical activity or exercise, based on the ideals of improvement in health indicators.

Leisure time is also the domain of physical activity that is amenable to public interventions, such that the choice as to whether to be physically active would be more within individuals’ reach, treated more as a choice and less as an imposition. Leisure time is the domain in which local culture gains force with its demands, attenuating the technical and scientific decontextualization. In leisure time, individuals can be exposed to experiences with meanings that are thus potentially lived, adopted or acquired, and maintained.

Therefore, the discussion returns to this section’s starting point about which kind of promotion of physical activity we are seeking. And in this sense, when seeking for more actions in the leisure-time domain, we also seek to considerations on the current scenario of heavy social inequalities in the leisure-time physical activity practice. Studies based on national surveys have denounced the striking gender and socioeconomic inequalities in access to leisure-time physical activity. Cultural aspects, environmental inequalities, and inequalities in access to Physical Education services are issues that make leisure-time physical activity and exercise a privilege rather than a human right.

**Ethical and practical reasons to tackle inequalities in physical activity**

One of the main issues in the debate in different areas of knowledge in the early 21st century is the issue of inequalities, and economic inequality is perhaps the most widely debated. Evidence in the health field points to the impact of inequalities, even in high-income countries. In aggregate analyses, a country’s gross domestic product (GDP) is not associated with health indicators such as life expectancy, obesity, and violence. Meanwhile, these and other health outcomes are associated with national indicators of income inequality (e.g., Gini index).

Various important Brazilian studies have emphasized the consequences of social inequalities in health, as a key issue for the discussion of any collective health scenario. It is essential to draw
on these and other references for a theoretical grasp of the “inequality” issue beyond the numbers, seeking a better understanding of the mechanisms by which inequalities are harmful to various health outcomes 23.

To reflect more pragmatically on the relevance of approaches to tackle inequalities in physical activity, this essay draws on two theories, the Inverse Equity Hypothesis 26,27 and the Inverse Care Law 28.

The Inverse Equity Hypothesis, proposed in 2000 by Victora et al. 26, seeks to understand how inequalities in health indicators tend to become established. In this hypothesis, the authors emphasize that health innovations (drugs, technologies, and services) tend to be adopted initially by the more socially and economically privileged groups, that is, those who already have the lowest morbidity and mortality. In the short term, these new interventions, if effective, generate a further increase in the health inequalities. This increasing inequality takes place in both the coverage reached by the technical services or drugs, and the health outcomes influenced by them. Therefore, if a health innovation’s coverage continues to grow, soon only the most underprivileged are left behind. The limit to the growth of inequalities comes when the most privileged approach 100% coverage, when the intervention begins to reach the poorest and the inequality tends to be reduced.

This Inverse Equity Hypothesis was recently tested with data from 286 surveys from low- and middle-income countries, assessing institutional delivery coverage 27. Besides proof of the hypothesis on the trend in inequalities, the new publication also focused on patterns of inequality and their repercussions on public policy planning. The first expected stage in this process is a pattern of widespread deprivation or “top inequality”, where only the most privileged enjoy the best coverage. After a process of growing differences between the extreme groups and partial improvement for the most underprivileged, a pattern of marginal exclusion or “bottom inequality” is reached, where only a small portion of the population is left behind with low coverage 27.

Let us return to the essay’s central theme. With a vaccine, drug, or other well-consolidated health intervention in terms of effectiveness such as institutional delivery care, universal coverage (100%) is expected (or as close as possible to it). However, with leisure-time physical activity, prevalence is not expected to reach 100% in any population group. This does not invalidate reflection on the theory and the theory’s application to the context of physical activity. As described next, the application only decreases the amplitude of inequalities in comparison to that theorized by the Inverse Equity Hypothesis.

Knowledge on physical activity and health has been developed consistently in the last 30 years, as presented at the beginning of this paper. However, what is new is the projection of this knowledge, or the social and media appeal for pursuit of a healthy lifestyle. In this sense, in relation to the Inverse Equity Hypothesis, the first observations feature the proliferation of fitness gyms in the private sector, the demand for personalized training, private sports and recreational clubs, and later, even in a crisis scenario, the expansion of the real estate market, selling the image or idea of a healthy environment, conducive to physical activity (e.g., gated communities with gyms). This expansion in the number of gyms and fitness-friendly real estate projects initially reached the most privileged groups in the society, but it later also reached intermediate groups in terms of socioeconomic conditions. All of this favoring growing inequality in leisure-time physical activity in Brazil. According to a survey in Brazil’s state capitals, leisure-time physical activity has increased in the last decade precisely in the portion of the population that already enjoyed the highest prevalence, namely men, younger individuals, and those with the most schooling 14.

The other relevant theory in the approach to inequalities is the Inverse Care Law, which emphasizes that the availability of healthcare tends to vary inversely to the population’s need 28. For example, children in more socially vulnerable localities tend to present the highest rates of health problems like diarrhea and pneumonia, due to their living conditions. However, these same children experience the greatest difficulty in accessing health systems. In general, those who most need medications, health services, or adherence to healthy behaviors are those who have least access, due to economic, sociodemographic, cultural, and geographic factors, among others. Thus, returning to physical activity as the focus of our discussion, whereas the heaviest burden of death due to NCDs is seen in the least favored segments of the population, we also find that these same population groups have the lowest prevalence of leisure-time physical activity. The least privileged, socially and economically, are
those that potentially have the greatest need for the benefits of physical activity from the perspective of health indicators, and are exactly the ones who would enjoy the greatest benefit in the prevention of NCDs. Another example of the Inverse Care Law in our area refers to public environments favorable to physical activity (quality of streets and availability of parks and city squares), which in general are systematically available in neighborhoods with the highest socioeconomic status, exactly for the population that would need in the least, who can (and generally do) opt for private spaces with a diverse menu of physical activities.

Thus, backed by these two theories, we return to the relevance of addressing these inequalities. The approach to inequalities is justified for ethical reasons related to ideological perspectives and political and social biases, but also for pragmatic reasons orienting public policies and the response to policymakers.

Reflecting on the ethical, political, and social component, we should distinguish between the concepts of inequality and inequity. Inequalities refer simply to the observed differences between groups. Inequality is usually viewed as the measurable and tangible component of inequities. The notion of inequity expands this scope. Whereas individuals are distinct and one would expect biological differences to exist in many instances, inequities are specific to unjust and systematic differences (permanent and always in the same direction). This requires a value judgment and a distinction between such concepts, for example when we analyze gender differences and economic status in terms of prevalence of physical activity. Such differences are unjust, or do we really expect these differences to exist between men and women, between the rich and the poor?

Differences in leisure-time physical activity will probably exist, which may not necessarily be a problem, as long as such differences are not the result of disadvantage. In an equity approach, it is essential to acknowledge the limits of promotion of physical activity if there are no structural changes in our society with the creation of opportunities for groups that have historically faced more barriers to practicing leisure-time physical activity (e.g., poor people experience more lack of access to recreational spaces than rich people; the double workday and greater vulnerability to insecurity is more common in women than in men). As highlighted by Williams et al., inequities will always exist if we remain ignorant to its meanings or if we take injustice for granted.

Thus, by showing that the traditionally observed differences involve important inequities, we need to reconsider the hegemonic and simplistic approaches to the promotion of physical activity and aspire to a situation in which women and more economically underprivileged groups will enjoy the same levels of leisure-time physical activity as their counterparts. Grasping the differences in levels of leisure-time physical activity as inequities, from an ethical, ideological, and social perspective, public policies focused on equity need to become demands by all actors involved in the promotion of physical activity. Besides, the promotion of autonomy, preservation of human dignity, access to leisure, and basic living conditions is an essential and obvious issue that implies greater integrity of life, where one of the consequences would certainly be greater production of health, thus viewing leisure-time physical activity as accessible and healthy.

Meanwhile, beyond this perspective that we analyze ethically, approaches to inequality are also justified on pragmatic grounds. The identification of priority groups and patterns of inequality is important for designing specific actions for the groups most in need. Such evidence also provides important tools for assessing policies that may be implemented. From this more pragmatic perspective, Mielke et al. describing gender inequalities in physical inactivity in 142 countries, showed that the target proposed by the World Health Organization to reduce the prevalence of physical inactivity by 10% worldwide, can be reached if we succeed in decreasing gender differences by increasing physical activity for women.
Relevance of public policies for the promotion of leisure-time physical activity

Recent years have witnessed the inclusion of physical activity on Brazil’s agenda of public policies in health. Physical activity has been included in the prevailing health monitoring systems for the Brazilian population (the Risk and Protective Factors Surveillance for Chronic Non-Comunicable Diseases Through Telephone Interview – VIGITEL, Brazilian National Survey of School Health – PeNSE, and Brazilian National Health Survey – PNS surveys). The main milestone was physical activity’s inclusion in the National Policy for Health Promotion and the National Policy for Basic Healthcare. In this context, various policies and specific actions for the promotion of physical activity and deserve mentioning, such as participation by Physical Education in the teams of the Support Centers for Family Health (recently renamed the Expanded Centers for Family Health and Basic Care), Street Clinics, Health Gyms, Centers for Psychosocial Care, and activity in tertiary care in various hospitals, besides local initiatives such as programs involving physical activity and physical exercise in the state and municipal health departments.

It is beyond the scope of this essay to describe in detail the activities, their achievements, or their various limitations. Rather, we aim to emphasize that many of these policies have the potential to promote equity in leisure-time physical activity. If in some way they still reach a small share of the Brazilian population, these initiatives should tend to reach exactly those who need them the most; put differently, the exclusion or reduction of such policies would further increase the inequities.

In addition, measures to promote physical activity associated with the Brazilian Unified National Health System (SUS) tend to be established with other important principles in the system besides equity and which are not necessarily common in Physical Education, such as the demand for the population’s universal and comprehensive coverage. For example, to consider the principle of comprehensiveness in the sense of covering individuals’ demands and needs is exactly what was criticized at the beginning of this essay on the prevailing forms of promotion of physical activity as any body movement (socially decontextualized). Such approach can also be defended from the perspective of exercise and physical activity as a tool with the capacity to oppose the biomedical model’s hegemony.

In addition, we are now experiencing, in both the Brazilian and global scenarios, the encroachment of fiscal austerity policies, which tend to increase social inequalities and their harmful effect on various health indicators. The United Nations report, by emphasizing that all people have the right to enjoy the highest possible level of physical and mental health, underscores the exacerbation of health conditions due to the implementation of austerity policies. In Brazil specifically, one of the world’s most unequal countries, a recent report by the Getúlio Vargas Foundation pointed to an increase in poverty and inequality in late 2018. The report further states that poverty in Brazil reverted to the same levels as in the early part of the decade (2011), and that inequality increased in the last three years analyzed. In health, in the Brazilian context, the 20-year freeze on funding for health and education under Constitutional Amendment n. 95 and evidence of the dismantlement of numerous public policies, including scrapping of the SUS, are worrisome signs of backstepping in the system. After a 15-year downward trend in infant mortality, a basic indicator of health and human development, an upturn was observed in 2016 and 2017. In terms of the all-cause age-adjusted mortality rate, the reduction observed in the previous 25 years in the burden attributed to NCDs stabilized between 2015 and 2016. Likewise, after seven years of a small and steady growth in the prevalence of leisure-time physical activity (although also with an increase in inequalities, as mentioned before), there has been a deceleration in this indicator in recent years. Without overlooking the multi- and macro-determination of these indicators, these health outcomes can be interpreted as latent signs of backstepping. Although these signs are obviously broader effects than those related specifically to the health sector, it is up to researchers, professors, and health professionals to understand the context and struggle more than ever for the public good, with a focus on those who most need care.
Final remarks

The current context demands the defense and expansion of public policies and initiatives to promote physical activity. The private sector will always submit its priority demands linked to market relations that tend to favor increasing inequalities. Returning to the Inverse Equity Hypothesis and its tendency to increase inequalities, it is almost exclusively up to public policies to avert or mitigate this trend. The priority should be public policies linked to the SUS and other sectors such as urban infrastructure and sports and recreation, incorporating the principles of the SUS of universal coverage, equity, and comprehensiveness. In this sense, we defend socially contextualized promotion of physical activity and physical exercise, capable of prioritizing those who most need them avoiding scenarios expected by the Inverse Care Law.

Contributors

I. Crochemore-Silva contributed in the conception of the essay and elaboration of the first version; critical revision and expansion of the analysis; debate and conception of the final version. A. G. Knuth, G. I. Mielke and M. R. Lock contributed in the critical revision of the proposal and expansion of the analysis; debate and conception of the final version.

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Resumo

O presente Ensaio propõe uma reflexão com base em algumas formas vigentes de promoção de atividade física, propondo visibilidade a atividades de lazer e suas desigualdades. O cenário atual de (aumento das) desigualdades e a importância do seu enfrentamento, destacando a pertinência das políticas públicas, são apresentados e discutidos à luz de duas teorias: a Hipótese da Equidade Inversa e a Lei dos Cuidados Inversos. A Hipótese da Equidade Inversa busca compreender como as desigualdades tendem a se estabelecer em indicadores de saúde, partindo de aumento esperado dessas desigualdades quando surgem inovações em saúde que atingem inicialmente os mais privilegiados social e economicamente. Já a Lei dos Cuidados Inversos destaca que a disponibilidade de uma atenção adequada em saúde tende a variar inversamente à necessidade da população. Nesse sentido, ao relacionar as teorias e a promoção de atividade física de lazer, o presente ensaio defende a ampliação das políticas públicas, visando a não ampliar as desigualdades. São as políticas públicas e a vinculação com o Sistema Único de Saúde (SUS) e com seus princípios que precisam ser compreendidas como prioridade. É nessa perspectiva que acreditamos em um avanço de ações de promoção das atividades físicas de lazer contextualizadas socialmente que sejam capazes de priorizar aqueles que mais necessitam.

Iniquidade; Atividades de Lazer; Atividade Motora

Resumen

Este Ensayo propone una reflexión sobre algunas formas vigentes de promoción de la actividad física, centrándose en las actividades físicas de ocio y sus desigualdades. El escenario actual de (aumento de) las desigualdades y la importancia de su combate, destacando la pertinencia de las políticas públicas, se presenta y discute a la luz de dos teorías: la Hipótesis de la Equidad Inversa y la Ley de Cuidados Inversos. La Hipótesis de la Equidad Inversa busca comprender cómo las desigualdades tienden a establecerse en indicadores de salud, partiendo de un aumento esperado de las desigualdades, cuando surgen innovaciones en salud que alcanzan inicialmente a los más privilegiados social y económicamente. Ya la Ley de los Cuidados Inversos destaca que la disponibilidad de una atención adecuada en salud tiende a variar inversamente, en función de las necesidades de la población. En este sentido, al relacionar las teorías y la promoción de la actividad física de ocio, este ensayo defiende la ampliación de las políticas públicas, con el fin de no ampliar las desigualdades. Son las políticas públicas, su vinculación con el Sistema Único de la Salud (SUS) y con sus principios los que necesitan ser comprendidos como prioridad. Desde esta perspectiva pensamos que se debe avanzar en la promoción de acciones de actividades físicas durante el ocio, contextualizadas socialmente, y que sean capaces de priorizar a quienes más lo necesitan.

Inequidad; Actividades Recreativas; Actividad Motora

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