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Review article

Approach to the programs of Regular Physical Activity applied to the Public Health during COVID-19 time

Acercamiento a los Programas de Actividad Física Regular aplicada a la Salud Pública en tiempos de COVID-19

Aproximação a programas regulares de Atividade Física Regular aplicada à saúde pública em tempos de COVID-19

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ABSTRACT

Covid-19 has spread with thousands of confirmed cases and deaths, challenging public health systems around the world; it is a disease for which there is no scientifically corroborated treatment so far, becoming a pandemic. Preventive mechanisms have been implemented by the different countries of the region to avoid contagion and spread. In this work, the aim was to analyze the Regular Physical Activity (RPA) programs and their results in the region in order to improve and overcome the harmless effects of the programs that have been developed to date. The objective of this study was to stimulate reflections on the benefits of the social programs of Regular Physical Activity and public health, as enhancers of healthy lifestyles and as favorable alternatives to the effects of

COVID-19 on people. The literature review method and the single case study were used. The preservation of health through Regular Physical Activity as a protective factor against COVID-19 is a responsibility of the individual and the family, but the promotion of public health and the encouragement, favoring and promotion of these Regular Physical Activity programs within the framework of public health will make it possible to prevent disease and prolong life. To this end, it is essential to address the culture, beliefs and expectations regarding Regular Physical Activity. In essence, the challenge is to overcome illiteracy in Public Health and build that bridge of approach so necessary in these times of COVID-19.

Keywords: Regular physical activity; COVID-19.

RESUMEN

La Covid-19 se ha extendido con miles de casos confirmados y muertes, desafiando los sistemas de salud pública de todo el mundo; es una enfermedad para la cual no existe hasta el momento un tratamiento científicamente corroborado transformándose en pandemia. Se han implementado mecanismos preventivos por los distintos países de la región para evitar el contagio y propagación. En este trabajo, se pretendió analizar los programas de Actividad Física Regular (RPA) y sus resultados en la región para mejorar y superar los efectos inocuos de los programas que actualmente se han venido desarrollando hasta la fecha. El objetivo de este estudio consistió en estimular reflexiones en cuanto a los beneficios de los programas sociales de Actividad Física Regular y salud pública, como potenciadores de estilos de vida saludable y como alternativas favorables frente a los efectos de la COVID-19 en las personas. Se utilizó el método de revisión bibliográfica y el estudio de caso único. La conservación de la salud a través de la Actividad Física Regular como factor protector frente a la COVID 19 es una responsabilidad del individuo y la familia, pero la promoción de la salud pública y el fomentar, favorecer e impulsar estos programas de Actividad Física Regular en el marco de la salud pública permitirán prevenir la enfermedad y prolongar la vida. Para ello, es indispensable que se atienda a la cultura, creencias y expectativas frente a la Actividad Física Regular. En esencia, el reto es salir del analfabetismo en Salud Pública y construir ese puente de acercamiento tan necesario en estos tiempos de COVID-19.

Palabras clave: Actividad física regular; COVID-19.

RESUMO

Covid-19 espalhou-se com milhares de casos e mortes confirmados, desafiando os sistemas de saúde pública em todo o mundo; é uma doença para a qual não existe até agora nenhum tratamento cientificamente corroborado, tornando-se uma pandemia. Foram implementados mecanismos preventivos pelos diferentes países da região para evitar o contágio e a propagação. Neste trabalho, o objectivo era analisar os programas de Atividade Física Regular (RPA) e os seus resultados na região a fim de melhorar e superar os efeitos inofensivos dos programas que foram desenvolvidos até à data. O objectivo deste estudo era estimular a reflexão sobre os benefícios dos programas sociais de Atividade Física Regular e saúde pública, como promotores de estilos de vida saudáveis e como alternativas favoráveis aos efeitos da COVID-19 nas pessoas. Foi utilizado o método de revisão bibliográfica e o estudo de caso único. A preservação da saúde através da Atividade Física Regular como factor de proteção contra a COVID 19 é uma responsabilidade do indivíduo e da família, mas a promoção da saúde pública e o encorajamento, favorecendo e impulsionando estes programas de Atividade Física

Regular no âmbito da saúde pública, tornará possível a prevenção de doenças e o prolongamento da vida. Para isso, é essencial abordar a cultura, crenças e expectativas em relação à Atividade Física Regular. Em essência, o desafio é sair do analfabetismo na Saúde Pública e construir essa ponte de abordagem tão necessária nestes tempos da COVID-19.

Palavras-chave: Atividade Física Regular; COVID-19.

INTRODUCTION

The world is currently experiencing a pandemic situation caused by COVID-19. In December 2019, Wuhan (Hubei, China) was alerted to the presence of an epidemic outbreak of a new severe respiratory disease (SARS, Severe Acute Respiratory Syndrome), the agent was quickly identified: a new coronavirus, initially called nCoV-19. In January 2020, the World Health Organization (WHO) declared an international health alert and the People's Republic of China redoubled its efforts to contain the epidemic with strict sanitary measures, including quarantine of the city (Villegas-Chiroque, M. 2020).

In this sense, this disease has spread rapidly around the world with thousands of confirmed cases and deaths, becoming a pandemic and challenging public health systems (Urzúa, A., Vera-Villarroel, P. *et al.,* 2020).

The disease presents in its clinical form including fever, malaise, dry cough, respiratory distress and gastrointestinal symptoms, after an incubation period of five days on average. According to severity and need for management, it is classified as mild-moderate (80 %, non-severe pneumonia), severe (15 %, severe pneumonia) and critical (5 %, SARS, sepsis and shock) (Villegas-Chiroque, M. 2020).

There is no approved and scientifically corroborated treatment so far, but preventive mechanisms have been implemented by the different countries to avoid contagion and spread.

COVID-19 has put the public health systems of the countries of the world under evaluation since, despite the low severity of the symptoms, the contagion is very rapid. Even if the number of cases that could become severe or lethal is proportionally low, the phenomenon of rapid spread can overwhelm the healthcare systems that provide help to the most seriously ill patients. In addition, if the virus reaches people with other diseases or the elderly, the disease becomes serious and, therefore, appropriate care for these cases is urgent (Urzúa, A., Vera-Villarroel, P. *et al.,* 2020).

A simple analysis of these facts shows that, for public health purposes, the seriousness is not only the virus itself, but also the rapidity of contagion to the population and the arrival to risk groups in a short time. This situation may lead to an inadequate capacity of emergency services to respond to a high demand in a short time (Urzúa, A., Vera-Villarroel, P. *et al.,* 2020).

Therefore, paraphrasing Urzúa, A., Vera-Villarroel, P. *et al.,* (2020), the question may arise: what variables make a virus/disease able to close borders and generate a health, political and economic collapse of the entire planet? What factors beyond the biological and the absence of a vaccine make it become one of the worst health and public health phenomena in recent years worldwide? The answer is considered to include not only the

behavior of individuals, but also, and to a greater extent, the public health system and the innocuous effects of the programs it has been developing.

Countries have mechanisms to prevent or cope with pertinence with the onslaught of various diseases. In this context, public health had the challenge of disseminating and developing community mechanisms for coping with this disease, encouraging the community to become aware of changes in their usual lifestyles. Therefore, it is important to speak of public health literacy as the possibility of generating reflective awareness about the coping with the disease, promoting as a community the need to pay attention to changes in our usual lifestyle, nutrition, regular physical activity, hydration, among others.

Health literacy has been approached extensively and with multiple perspectives since the 1970s, when Professor Scott K. Symonds used the term for the first time in the framework of a conference on education and health. From this point of view, its importance was highlighted, in a global strategy framework (Juvinyà D., Bertran C., and Suñer, R. 2018).

Cabello Morales, E. A. (2017) states that,

> "…public health literacy implies the idea that regular and adapted physical exercise for the elderly is associated with a lower risk of mortality. Mainly as a consequence of a cardiovascular and metabolic syndrome protective effect, in addition to the population knowing that this, decreases the risk of suffering a myocardial infarction and developing type II diabetes".

Aparicio García-Molina, VA and Carbonell-Baeza, A. *et. al.,* (2010) point out that,

> "Regular exercise has been shown to be effective in the prevention of certain types of cancer and increases bone mineral density. They also point out that it reduces the risk of falls, reduces osteoarticular pain (frequent in the elderly population) and improves cognitive function, reducing the risk of dementia and Alzheimer's disease".

Therefore, it is stated that the psychosocial benefits of exercise should be disseminated and promoted through Public Health programs, informing that by participating in these programs, isolation, depression and anxiety are being combated and favoring self-esteem and social cohesion.

Martínez N., Santaella E., and Rodríguez A.-M. (2020) analyze the positive impact of physical activity on the well-being of the elderly; they found from a systematic review that the regular practice of physical activity produces an increase in self-confidence, sense of well-being, and improvement in intellectual functioning.

Martínez N., Santaella E. and Rodríguez A.-M. (2020) mention that these findings are of extraordinary interest for the population, in the context of psychological treatment in cases of depression, stress or anxiety. They recognize the contribution of the daily practice of physical activity on the increase of self-esteem levels, self-care, integration of the body scheme, among other positive aspects.

Larios A., Bohórquez J., Naranjo and, Sáenz J. (2020) in a recent review, exposed the psychological impact of quarantine product of the epidemics that have struck humanity, they point out that this measure has had a negative effect on the mental health of

people, with a higher prevalence of mental symptoms such as anguish, anxiety, sadness, low self-esteem, anger, rage, isolation, low mood and insomnia, and the emergence of disorders such as depression, anxiety, obsessive-compulsive disorder, post-traumatic stress disorder and suicide, among others.

Encouraging, favoring and promoting these regular physical activity programs within the framework of Public Health could favor disease prevention, prolong life and generate spaces for health literacy in citizens, through organized community efforts (Figueroa de López S. 2012).

For Baena S., Tauler P., Aguiló A., García O., and Aguiló, A. (2021) physical exercise has an important role in the preservation of the immune system, which is vital to prevent infections it is important to promote physical exercise and maintain a healthy state.

Recent studies have suggested implementing general exercise routines during the quarantine period. However, to improve health-related fitness components, any specific prescription should include intensity, volume, duration and mode (Baena S., Tauler P., Aguiló A., García O., and Aguiló, A. 2021).

Baena S., Tauler P., Aguiló A., García O., and Aguiló, A. (2021) point out that controversy persists about what is the best intensity of physical activity, while exercising at a moderate intensity could bring important benefits to asymptomatic individuals.

This disease has already been reported in all continents. The Americas are among the most affected and Peru is one of the countries that is suffering strongly from its onslaught. Since March 11, 2020, the World Health Organization declared a COVID-19 pandemic due to the high number of cases in 112 countries outside China. In Peru, on March 5, the first imported case of COVID-19 was confirmed in a person with a history of travel to Spain, France and the Czech Republic. From that date until March 16, 2021, 1,435,598 positive cases of COVID-19 and 7,030,585 negative cases have been reported. As time went by, the outbreak spread throughout the country, causing 49 523 deaths as of the date of this article (PAHO Pan American Health Organization 2021).

The health system had to face this experience in the management of patients diagnosed with severe COVID-19. The risk factors detected were: arterial hypertension and obesity; the main symptoms: cough, fever and dyspnea. Frequent laboratory findings: elevated C-reactive protein and lymphopenia; predominant radiological presentation: bilateral interstitial pulmonary infiltrate (Acosta, G., Escobar, G., Bernaola, G. *et al.,* 2020).

It is important to reflect on the fact that these risk factors found in Peru are also found in other Latin American contexts. It reinforces the importance of favoring public health policies and social programs, such as regular physical activity, which have been shown to have had a positive influence, reducing the risk factors that exacerbate mortality caused by COVID-19.

The literature review method and the single case study were used to present a practical example that facilitates the understanding of the ideas and illustrates the fundamental elements found in the sources consulted.

In this context and with the information gathered, it is considered important to stimulate reflections on the influence of regular physical activity programs on Public Health, as favorable alternatives to the effects of COVID-19 on people.

DEVELOPMENT

Health, covid-19 and its effects

A.L.P., are the initials of a 72 year old Peruvian woman, black and of medium height. The lady was always smiling and worried about her family. During the quarantine period she stayed at home without going out, worried about complying fully with the isolation.

A.L.P. participated in a Public Health program, in which she made use of physical activity through Taichi; a Public Health Program in Peru aimed at helping older adults to improve their physical condition.

These programs were offered to the community with the intention of promoting regular physical activity. But in this context, what is public health? The PAHO definition "... Public Health indicates that it is the organized effort of society, mainly through its public institutions, to improve, promote, protect and restore the health of populations through collective actions" (Figueroa de López S. 2012, P.3).

Public health is considered to be:

> "...It is the integrated social practice that has as subject and object of study, the health of human populations and is considered as the science responsible for preventing disease, disability, prolonging life, promoting physical and mental health, through the organized efforts of the community, for the sanitation of the environment and development of social machinery, to address health problems and maintain an adequate standard of living" (Figueroa de López S., 2012. P.3).

How difficult it was to explain to A.L.P. the meaning of public health or to explain to her that she should change her healthy lifestyles, this makes us reflect on the concrete fact that it is not only important to have a clear definition of public health, it is also important to have a health literacy that allows us to promote healthy lifestyles that give a lived meaning to public health.

In truth, the promotion of physical activity and health in the case of A.L.P. showed that the effects of this program were very good, fundamentally in a framework of normality, it was impressive to see her return from her practices, happy to have shared with her friends' spaces of interaction.

For Lazcano-Ponce E., Alpuche-Aranda C. (2020) this process is focused on obtaining knowledge, motivation and individual competencies, to understand and access information, express opinions and make decisions related to health promotion and maintenance. All of this is applicable in different contexts, settings and throughout life. But A.L.P., at 72 years of age, had spent more than forty of those years of her life in the kitchen and the rest of the housework, so restructuring those habits, as would happen in any person, would be a complicated task, even more so in a society such as the Peruvian one.

When this disease arrived in Peru very few would have taken into account what was said by Lazcano-Ponce E, Alpuche-Aranda C. (2020) about the devastating effects of COVID-19, not only from the health point of view, but also, very importantly, from the economic, political and social point of view, and even in the midst of the figures and repercussions that even now affect our citizens, it is difficult to understand the value of Public Health and the effects of sustained APR programs.

The most common effects or symptoms of COVID-19 are fever, dry cough and tiredness. Other less common symptoms such as aches and pains, nasal congestion, headache and conjunctivitis may also be evident. Occasionally, sore throat, diarrhea, loss of taste or smell, and skin rashes or color changes in the fingers or toes may be present. Essentially these symptoms are usually mild and begin gradually (Questions and answers about coronavirus disease COVID-19. 2019).

The World Health Organization reports that:

> "Most people (about 80 %) recover from the disease without needing hospital treatment. About 1 in 5 people who contract COVID 19 eventually develop severe disease and experience breathing difficulties. Older people and those with previous medical conditions such as high blood pressure, heart or lung problems, diabetes, or cancer are more likely to develop severe disease" (Questions and Answers about coronavirus disease COVID-19. 2019).

A.L.P., who did not leave the house, was infected with COVID-19 by one of her sons, who was asymptomatic and considered that it would never affect him. The following question arises: did public policies really fulfill their function in this case?

For Lazcano-Ponce E, Alpuche-Aranda C. (2020) the orientation of public policies for prevention and control, stand out as follows:

a) Epidemiological intelligence, which includes not only the population-based surveillance strategy but, given the real impossibility of identifying all positive cases, the implementation of sentinel surveillance strategies and event-based surveillance.
b) Measures to mitigate the spread of the epidemic, such as social distancing and hygiene, hand washing, quarantine, restriction of movement and use of masks, among others.
c) Transmission suppression measures when the number of cases is very high, such as tightening of drastic home confinement measures.
d) Strengthening health care capacity in health systems and increasing transmission prevention capacity in health services, including the usefulness of diagnostic tests.
e) The development of prophylactic vaccines against COVID-19, as well as the generation of therapeutic agents.

All these actions should not only be implemented rapidly from a multidisciplinary and multisectoral public health perspective to contain, prevent and control the epidemic, but also require the participation of the community as a shared responsibility. Because of all this, public health literacy is necessary (Lazcano-Ponce, E., Alpuche-Aranda C., 2020. P.317).

Comorbidity versus COVID 19

It is important to talk about comorbidity in relation to COVID- 19, to inform, to teach that the results show that, among the lethal cases, the prevalence of being male is 67 %. Where the most prevalent comorbidity was hypertension 46 %. Approximately a quarter of the lethal cases reported diabetes mellitus 24 % and cardiovascular diseases 25 %. The prevalence of chronic pulmonary disease, cerebrovascular disease and neoplasia was 11 %, respectively. Finally, the lowest prevalences are shown for chronic kidney disease 6 % and chronic liver disease 2 % (ESSALUD, 2020).

The evolution varies according to age and the presence of comorbidity: children, adolescents and young people under 24 years of age have a mild disease, adults between 25 and 65 years of age progress well if they do not present risk factors, but those over 65 years of age with comorbidity are the most vulnerable. The risk factors identified are: cardiovascular disease, arterial hypertension (AHT), diabetes and pulmonary, hepatic or chronic renal disease (Villegas-Chiroque, M., 2020).

It is important to talk to the community about prevention, about the effect of RPA provided through public health programs, thus trying to achieve an improvement in quality of life so that this is reflected in each of its individuals.

Benefits of regular physical activity vs. COVID 19

It is common to hear the phrase "Sport is Health" or statements from different Physical Education professionals about the benefits and contributions of the practice of RPA or Healthy Physical Activity, in this sense it is important to ask ourselves what is the contribution that RPA could provide to prevent the effects produced by COVID-19? Ortiz Guzmán, J., and Villamil Duarte, A. (2020) searched for articles published between February and May 2020, retrieving 53 records in total and including 16 of them in the final review. The results attest that RPA is an important tool to face the adverse effects caused on the organism due to SARS-Cov-2 infection:

a) Improves the immune system response to a possible SARS-CoV-2 infection.
b) Increases the action of the angiotensin-angiotensin 1,7-Receptor Mas converting enzyme isoform 2 (ACE2-Ang.1,7-Rec.Mas.) axis, which favors anti-inflammatory and antithrombotic stages and decreases oxidative stress.
c) It decreases the incidence or helps in the control of the main comorbidities that predispose to the development of more severe symptoms and that increase the risk of mortality in the presence of COVID-19.

With these findings, they concluded that the regular practice of RPA offers a better preventive response to COVID-19, decreasing the risk of mortality. Besides allowing to face the current pandemic situation, since it helps to maintain good physical fitness and mental health during the period of social isolation and confinement.

If it is true that RPA is beneficial against COVID-19, it is relevant to ask ourselves what type of physical activity is most advisable to enhance the action against COVID-19.

In this regard, Ortiz Guzmán, J., and Villamil Duarte, A. (2020) consider that the scientific evidence indicates that people who performed continuous aerobic exercise had a higher plasma concentration, which is favorable and recommendable for strengthening the organism against COVID-19.

On the other hand, and although Ortiz Guzmán, J., and Villamil Duarte, A. (2020) point out that it is premature to elucidate the molecular mechanisms through which the practice of RFA evidences protective effects on SARS-CoV-2 infection, what has been documented for many years is that exercise exerts protective effects on a good group of diseases, but there is still much research to be done on COVID-19.

Ortiz Guzman, J., and Villamil Duarte, A. (2020) point out an important fact about the Scandinavian journal of medicine & science in sports, where Pedersen and Saltin published a very complete review with clinical support on the importance of prescribing PRA as therapy in 26 different pathologies, among which are psychiatric, neurological,

metabolic, cardiovascular, pulmonary and cancer diseases (Pedersen and Saltin, as cited in Ortiz Guzmán, J. and Villamil Duarte, A. 2020).

The WHO/ FIMS Committee and Physical Activity for Health (1995), points out that physical activity increases longevity and, to a large extent, protects against the manifestation of major chronic non-communicable diseases. In general, it has been noted that there are a large number of people who, due to lack of physical activity, function below their biological potential for good health.

It is important to mention that the Committee of the World Health Organization and the International Federation of Sports Medicine on Physical Activity for Health (1995) point out that personal health is a responsibility of the individual and the family, but the intervention of the State is needed to create a social and physical environment that allows adopting and maintaining a physically active lifestyle that generates well-being.

It is undeniable that the promotion of regular physical activity should be part of the social policy in Public Health because the repercussions are important and far-reaching.

Based on the WHO/ FIMS Committee and Physical Activity for Health (1995), we consider it relevant to point out that the wellbeing generated by the contributions of PAH requires public health literacy policies based on the following topics:

1. Promote action in all public agencies to establish institutional policies that promote regular physical activity.

2. To educate and re-educate physicians, other health professionals, education and Physical Education teachers of all grades and levels, as well as management and administrative personnel, to encourage regular and healthy physical activity; to value the role of the Physical Education teacher as an agent of Public Health.

3. To provide convenient facilities and give high priority to prevention and professionalism in the professional mediation of the Physical Education, Health and Sports specialist.

4. Conduct proven Public Health literacy and education campaigns in health services, schools and the media.

5. To monitor the activity and the physical fitness from the national point of view, to alphabetize on the meaning of one's own health and Public Health in a ludic and entertaining way, taking into account the differences in terms of social inequalities and the remarkable diversity of our contexts.

This analysis suggests reflections on the possibility of stimulating in our citizens some responses to strengthen their immune system against the danger posed by COVID-19 infection. Therefore, a public health perspective cannot deny the benefits of RPA in the body as a preventive factor of COVID-19 and should apply RPA in their programs, which are more than supported by research that, although they should be deepened, provide sufficient data to promote their application and sustainability (Ortiz Guzmán, J., and Villamil Duarte, A., 2020).

Regular Physical Activity and Public Health Social Programs

The Pan American Health Organization (PAHO, 2019) proposes The global plan on Physical Activity 2018-2030 called "More active people for a healthier world", a program that seeks to disseminate through sustained plans in the different countries that make up the PAHO, actions that influence public health and activities that favor among others the RPA. Not only recreational proposals, but also the promotion of health literacy on healthy lifestyles; an obligation of the state, within the framework of Public Health Policies.

PAHO recognizes that global progress in increasing physical activity has been slow, largely due to lack of awareness and investment (2019).

The global cost of physical inactivity is estimated to be millions annually in direct medical care, with additional millions attributable to lost productivity and costs associated with mental health and musculoskeletal conditions, so it is important to take action (PAHO, 2019).

This regional action plan outlined by PAHO (2019) considers it essential to implement policies to promote walking, cycling, sport, active recreation, and play, which can directly contribute to achieving many of the sustainable development goals by 2030.

The mission, goals and strategic objectives set forth by this Organization (2019) in the intention of favoring public policies throughout the community that favor RPA are:

Goal: a 15 % relative reduction in the global prevalence of physical inactivity in adults and adolescents by 2030.

Mission: to ensure that all people have access to safe and supportive environments and diverse opportunities to be physically active in their daily lives as a means to improve individual and community health and contribute to the social, cultural and economic development of all nations.

Objective 1: to create an active society that fosters normative foundations and promotes positive social attitudes and a paradigm shift throughout society by improving knowledge, understanding and appreciation of the multiple benefits of regular physical activity.

Objective 2: create active environments: addresses the need to create favorable spaces and places that promote and safeguard the rights of all people, of all ages and capacities.

Objective 3: foster active populations: increased programs and opportunities can help people of all ages and capacities to participate regularly in physical activity, alone or with their families and communities.

Objective 4: Build systems: Strengthen the systems needed to implement effective and coordinated international, national, and subnational actions to increase physical activity and reduce sedentary lifestyles. These actions address issues of governance, leadership, multisectoral partnerships, workforce capacities, advocacy, information systems, and funding mechanisms across sectors.

The Pan American Health Organization's view on public health literacy is therefore clear, in this case for addressing Noncommunicable diseases, which in this period are a severe risk factor for the COVID-19, and there is more than one solid reason for it to be analyzed from the perspective of the countries of the region.

Public health as a manager of healthy lifestyles

Public health as an organized activity does not yet have a long tradition, activities have been developed in the different countries of Latin America and the Caribbean that have resulted in the preservation of collective health, but they have not been the product of a formal organization with this sole purpose. In other words, health actions were unconscious and until today it is necessary to find new organizational patterns that allow the generation of public health literacy (Londono, F., 1963).

But what is being done in Latin America in terms of public health? In this pandemic context, it is important to analyze how RPA is promoted, especially when it is a priority to make the population literate in Public Health.

In Cuba, Quintero, E., Fe de la Mella, S. and Gómez, L. (2017) researched on the existence of essential functions of public health, linked to primary prevention, they found the conceptualization made that clarifies some edges of health promotion and its link with primary prevention, preventive health literacy, an essential component for the development of public health. In addition, it is important to highlight Martínez, Lázaro. N. I. (2019) regarding the low level of physical activity of the population in the world, affirms that, in Cuba, for decades, important results were obtained in the elevation of the capacity of physical performance of its inhabitants thanks to the development of numerous programs. At present, however, there are many statements about the decrease experienced by all groups of the population.

In Chile, with regard to public health, we can read Salinas, J., and Vio, F. (2003), who indicate in their study on the promotion of health and physical activity that the prevalence of sedentary lifestyles in the population aged 15 years and over was expected to decrease by seven percentage points by 2010 (from 91 to 84 %).

The strategies adopted were intersectoral and participatory in nature, and educational and community procedures were carried out to stimulate citizen responsibility. The implementation of these strategies was mainly the responsibility of local government through communal promotion plans (Salinas, J., and Vio, F. 2003).

In Argentina, they sought to estimate the mortality and economic costs of cardiovascular diseases attributable to physical inactivity. This research found that economic losses ranged from 0.61 % of GDP for the minimum scenario due to cardiovascular deaths, 0.85% for the medium scenario, and 1.48 % for the maximum scenario. Therefore, in their conclusions, they recommended strengthening the development of public policies aimed at reducing sedentary lifestyles (García C. and González J. 2017).

In Peru, we sought to determine the frequency of sporting activity in the urban population and to identify the sociodemographic, economic and environmental factors associated with it, using information collected by the National Household Survey for the second quarter of 1997, Peru (ENAHO 97-II), conducted by the National Institute of Statistics and Informatics of Peru. As a result of this research, it was found that the practice of RPA in urban areas of Peru is scarce. The most affected are those under 30 years of age, women and residents of the metropolitan area of the capital. This

insufficient practice of RPA constitutes a challenge for Public Health and reaffirms the need to promote active lifestyles (Seclén-Palacín, J. A. and Jacoby, E. R., 2003).

CONCLUSSION

It is important to point out how the case of A.L.P. makes it possible to demonstrate, from the particularity of the citizen, the benefits of public health programs. It allows to observe if these public health programs attend and favor what they were created for, it is important to know how a particular case is linked to a system that evidences a need not only at the level of a country but also at the level of a region.

Throughout Latin America, it is necessary to generate a public health culture that promotes literacy that allows for knowledge and preventive awareness of COVID-19 and its sequelae.

In this review, there is more than one evidence that supports the positive influence of RPA against COVID-19 in Peru and Latin America, and several countries in the region are already promoting programs around RPA and healthy lifestyles.

It is also possible to affirm the value of these RPA programs within the framework of public health literacy; these programs are an important ally for the development of policies in the region that favor the well-being of its citizens, but this will only be achieved if the culture, beliefs and expectations regarding RPA are addressed; in essence, the challenge is to overcome illiteracy in public health and build the bridge of approach so necessary in these times of COVID-19.

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Abel Luis Lino Asin: Conception of the idea, authorship coordinator, general advice on the topic addressed, literature search and review, translation of terms or information obtained, compilation of information resulting from the instruments applied, database preparation, drafting of the original (first version), review of the application of the applied bibliographic standard, review and final version of the article, article correction.