

Physical Inactivity in Girls at School

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Physical inactivity has been cited as the 4th leading cause of death worldwide, and the World Health Organization (WHO) reported that this global issue is more frequent and severe in girls and women. The WHO further stated that schools should promote physical practices, such as exercise and sports, to ensure that recommendations for daily physical activity are adopted and achieved in student populations.

Keywords: physical inactivity ; gender ; physical education ; socioecological model ; physical activities ; public policies ; girls

1. Introduction

Physical inactivity has been cited as the 4th leading cause of death worldwide ^[1], and in recent years, the World Health Organization (WHO) reported that this global issue is more frequent and severe in girls and women ^{[2][3][4][5]}. The WHO further stated that schools should promote physical practices, such as exercise and sports, to ensure that recommendations for daily physical activity are adopted and achieved in student populations ^[6].

Chile is no exception in relation to the population achieving the required levels of physical activity encouraged by public health guidelines. The 2017 National Health Survey ^[7] reported that 86.7% of people do not exercise at least 3 times per week and noted the worrying trend that 9 out of 10 women, and people from lower socioeconomic backgrounds, were deemed sedentary. Further, 96% of children with less than 8 years of schooling were also considered inactive.

The Ministry of Education generates actions to decrease physical inactivity at school. The National School and Scholarship Assistance Council (JUNAEB, for its Spanish acronym) presented the nutritional map of the country's educational institutions, indicating that 50% of students attending pre-kindergarten to 9th grade were overweight or obese, as a result of physical inactivity, among other causes ^[8]. To overcome this situation, JUNAEB promotes the programs "Escuelas Saludables para el Aprendizaje" (Healthy Schools for Learning) and "Contrapeso" (Counterweight), which are aimed at reducing physical inactivity and obesity. Meanwhile, the Ministry itself published the Guidelines and Considerations for School Physical Activity during the pandemic ^[9]. In December 2021, the Ministry of Sports declared that 78.5% of children aged 11–17 were physically inactive and highlighted that girls are the most affected group (84.9%) compared with boys (71.8%) ^[10].

In line with this problem, from 2014 onwards, all Chilean schools began to be evaluated through the education quality measurement system (SIMCE, Spanish abbreviation) regarding the promotion of healthy lifestyle habits in the school community ^[11]. Moreover, in 2015, the Ministry of Sports created the "Escuelas Deportivas Integrales" program (Comprehensive Sports Schools), which offered an increase in physical activity in public schools alongside professional mentoring by psychologists and nutritionists. Under Sebastián Piñera's government (2018–2022), this program changed its name to "Crecer En Movimiento" (Growing on the Move), maintaining the same intervention strategy.

Today, different schools across the country implement and/or create interventions aimed at reducing the population's physical inactivity. Therefore, educational institutions have become privileged spaces to affect behavioral changes in the physical activity of students ^{[2][6]}. In this context, a bill requiring Chilean schools to undertake 15 min of daily physical activity was passed (see: Boletín 11518-11), an initiative that has led to tension in the school communities, as not all of them have the resources to adopt this bill.

As for the public and private initiatives that have attempted to reduce physical inactivity, several studies ^{[11][12][13][14][15]} have shown that interventions focused on prompting individual behavioral changes concerning diet and amount of physical activity do not lead to significant changes.

Some explanations have noted that the discourse inspiring the development of healthcare policies is based on medicine and biomedicine ^[16], and that the actions suggested by them have focused on individuals ^[17]. This has been consistent with linear logic with respect to problems and solutions, as the idea that people should be responsible and make the correct choices to reduce physical inactivity in their lives has been established, which several authors ^{[18][19]} have called the moralization of everyday life, which ignores the various social determinants of health ^{[1][12]}.

In agreement with the above, different studies have aimed to contribute to the project for the reduction of physical inactivity across the world. In this sense, Mielke et al. ^[20] highlight the fact that, except for only 8 of the 142 countries studied, women were more inactive than men, a situation that aligns with the Chilean figures.

As for the approach adopted to reduce physical inactivity, Westerbeek and Eime ^[21] suggest that a transition has been observed in the last few years regarding public policy models—from a sports-competition to a sports-recreation model that is fully integrated into individual's daily lives. The sports-recreation model is known as a comprehensive sports ecosystem because, and similar to Muzenda et al.'s ^[22] proposition, it considers trans-sectoral cooperation, and the incorporation of contributions from other sectors such as health, education, transportation, and urban planning to be essential.

Recent studies show that including children's preferences is crucial for them to acquire the habit of exercising. In other words, to achieve positive changes in public policies, children should be included in this process by listening to their opinions, and regarding them as active subjects capable of engaging in reality ^[23].

Considering the pandemic, several studies ^{[24][25]} mention that physical inactivity and sedentary behavior in children and youth increase as a result of COVID-19.

2. Physical Inactivity in Girls

Isorna et al. ^[26] indicated that the physical (in)activity of women is influenced by gender stereotypes that condition the pedagogical processes and students' aptitude. These processes affect personal interests and motivations, thus influencing their level of involvement in some physical activities.

Castejón and Gimenez ^[27] revealed that in physical education (PE) class, boys preferred sports, while girls opted for expressive activities, such as dancing. According to Alsarve ^[28], this could be associated with the masculinized approach used in these classes, as it highlights that the beliefs and views of masculinity and femininity are stereotyped. Based on this work, masculinity was linked to traits such as physical strength, roughness, and agility; conversely, however, feminine roles were related to household chores, fragility, rhythm, subordination, and weakness.

According to Alvaríñas and Pazos ^[29], Curieses ^[30], and Mujica ^[31], these stereotypes threaten women's involvement in traditionally male-dominated disciplines and are justified by the idea of sports as an impractical and dangerous activity for women. Similarly, imagery has been constructed of women who engage in sports (either recreationally or competitively) as transgressing gender norms.

As for the role played by PE, several authors ^{[29][30]} express that this discipline is permeated by male and female stereotypes that are present at school, validating the differences between genders and thus affecting school culture. In this sense, Cameron and Humbert ^[32] indicated that this situation is closely related to the roles played by men and women in society, concretely representing this through the existing differentiation between sports designated as "male" or "female." In this way, gendered differences in PE and incidental physical activity (play) at school become naturalized to educators ^[33].

The above, according to Parri and Ceciliani ^[34], would translate into differential behaviors by teachers, conveyed in subtle and explicit manners through various learning expectations. The authors further indicate that the differential expectations also affect girls in key aspects related to their identity and self-esteem, negatively conditioning their engagement with physical activity, and pushing them into smaller spaces, instilling submission, and a lower acceptance of physical contact. In contrast, Fissette ^[35] explained that female students consider differential treatment and gender and sports-associated stereotypes to be unfair, contributing to the 'why' they drop out of sport and physical activity.

In line with this issue, Mayorga et al. ^[36] suggested that unequal treatment is one of the barriers perceived by teenagers when doing physical activity, subsequently influencing their habits as adults. Moreover, Sánchez et al. ^[37] stated that the role played by teachers and their behavior concerning gender is conditioned by the influence of other factors, such as socioeconomic, environmental, family, or cultural variables. For this reason, teachers face the challenge of integrating

these variables into their work and promoting innovations in each class for students to feel involved in the educational process, rather than feeling excluded owing to their gender, abilities, or physical qualities.

In the same vein, a recent study conducted by Energici et al. [38] reported that the abovementioned situation may be explained by the reproduction of gender stereotypes created in and through the practice of physical activities. This study may be considered a radical criticism of the individualistic model for addressing physical inactivity, as it suggests that the factors affecting this problem go beyond individuals.

The concern with children's and adolescents' experiences of physical activity is the relationship between these experiences and lifelong engagement with physical activity [39]. The school and PE are likely to be important locations for these experiences. If PE is gendered to create negative experiences for girls, then the likelihood of physical activity in adulthood for women may be reduced [40].

3. The Socioecological Model

Criticism of the individualistic perspective that seeks to reduce physical inactivity at school has been identified in recent years. One critique suggests that this perspective has not considered that each educational reality has its own school culture, and that the provision of a standard measure may overshadow both the local problems and the strengths of a community to solve them [6]. Similarly, studies report that including health in PE has led to activities that children are reluctant to do [41], as well as triggered emotions that may result in a preventive pathologization of their everyday life [42], causing fear [43][44] and annoyance [45]—emotions that fail to bring about the change that public policies seek [46].

These studies considered the socioecological model developed by Bronfenbrenner [47], who aimed to make the various dimensions interacting in the continuance and promotion of several social problems visible, specifying the existence of a dependency between systems and agents, which, in turn, exert a great influence on individuals' behaviors and practices.

Specifically, research on physical inactivity from this approach includes studies conducted by other scholars [48][49][50]. McLeroy et al. [48] suggested an ecological model featuring five degrees of influence (at the intrapersonal, interpersonal, institutional, community, and public policy levels), which should be considered in any intervention promoting a reduction in physical inactivity, as proposed by the WHO. Sallis et al. [51] highlighted the environmental and political influences in four fields of active life (recreation, transportation, occupation, and home) and called for collaboration with policy researchers to improve the probability of translating research results into changes in the environments, professional practices, and public policies. Bauman et al. [52], for their part, focus on the areas of life wherein exercise is done (home, work, transportation, and leisure time) and mention that these are different according to the country, age, gender, ethnic origin, and socioeconomic status of each context.

In the last few years, different authors [53][54][55][56][57] have adopted this approach to assess physical inactivity. In a cross-sectional way, they indicate that at the intrapersonal level, gender, age, ethnic group, and self-concept are relevant aspects, while at the interpersonal level, the family environment and meeting with friends are key points to explain engagement in physical activities. As for organizations and schools, the role of teachers and principals should be emphasized, whereas at the community level, socioeconomic aspects, educational level, and screen time are factors affecting physical inactivity. From the public policy dimension, access to facilities and safe neighborhoods are crucial factors for individuals to undertake physical activity.

Taking into account the criticisms of the individualistic and biomedical approach to achieving any meaningful change in the physical activity levels of populations, especially in relation to gendered differences, the research seeks to assess the effects of the public policy agenda to increase physical activity in Chilean schools. The researchers utilize a socioecological framework to engage with a variety of actors in schools to understand the complexities of implementing such agendas, especially in relation to the reproduction of physical inactivity in girls in educational settings.

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