

## Physical training from a moral perspective

### Paper Title

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*Building a Better Future*

## **Abstract**

*Key Words:* Physical Exercise, Integral Health, Moral Development, Categorical Imperative, Autonomy, Self Regulation, Aesthetic.

The purpose of this study is to establish the relationship between moral development from a Kantian perspective and physical exercise in adolescents from 13 to 15 years old from the LSTM. In order to measure the internalization of self-regulation and autonomy in the rational construction of a categorical imperative, exercise is assumed as an end in itself and not as a way to obtain results of an aesthetic nature. This means that if the practice of sports is considered a way to improve or make bodily changes or to look for integral health, would be saying that the practice of sports is a means to obtain such ends and would be closer to the emotional plane, outside the rationality that should be the center of "the duty to be" which is the way to comply with the categorical imperative.

The research defined the age group to be analyzed as adolescents between 13 and 15 years of age, choosing this population due to the confluence of factors such as the whole experience of adolescence, where their sense of identity is under construction concerning their peers, with a strong aesthetic sense as a condition of image and recognition, but also their moral condition is in process, where factors such as freedom and autonomy demand moral regulations. The universe of the sample was 66, of which four students being randomly selected, two who showed high levels of sports discipline and two for whom, even knowing that they had a high level of sports discipline, they had a high level of moral and moral development and two for

whom, even knowing that they had a high level of sports discipline and two for those who, even knowing the advantages of sport in the integral health, do not have any mobilization to incorporate or change healthy habits; to these four young people an in-depth interview was applied as an instrument to generate the categories of qualitative analysis.

The present research belongs to a line of research from the Kantian approach, but also partly from Piaget's approach, in which social, personal, moral and attitudinal fields are included.

### **Justification**

Nowadays healthy lifestyles are chosen and their relevance has been studied. According to Díaz (2004), “La Federación Internacional de Medicina del Deporte y la OMS señalan que ... la actividad física diaria debe aceptarse como piedra angular de un estilo de vida sano; por lo tanto la actividad debe integrarse en los hábitos cotidianos.” (p. 213).

[“The International Federation of Sports Medicine and WHO state that "...daily physical activity should be accepted as a cornerstone of a healthy lifestyle; therefore, activity should be integrated into daily habits.”] (p. 213).

In Arana et al. (2023), specific reference is made to healthy habits in adolescents, which is the target population of the research:

Physical inactivity, poor eating habits, and the practice of harmful leisure activities are today among the fundamental problems of global society. Therefore, it is necessary to

generate good healthy habits in the adolescent population to ensure that they establish healthy behaviors and reach adulthood with good biopsychosocial health. (p. 2).

However, it is essential to keep in mind that there may be a blurred boundary between physical training, healthy lifestyle habits, and a need to comply with aesthetic standards promoted by the consumer society; therefore, as stated by Díaz (2004), “Los peligros de la mala práctica deportiva y la explotación comercial del «cuerpo ideal» demandan el interés de la Salud Pública por este fenómeno socio-cultural, convertido en un elemento popular del ahora denominado «estilo saludable de vida».” (p. 212).

[ "The dangers of poor sports practice and the commercial exploitation of the "ideal body" demand the interest of Public Health in this socio-cultural phenomenon, which has become a popular element of the now-called "healthy lifestyle" ] (p. 212).

Díaz (2004) also points out that:

La venta de la imagen de un “cuerpo ideal”, la promoción del autocuidado dentro de las políticas de salud y el desarrollo de industrias aledañas (cosmética, alimentos dietéticos, gimnasios,...), estimula el consumo de la imagen del otro: “El hombre se convierte en producción y consumo, mercancía consumidora y útil viviente” (p. 214).

[The sale of the image of an "ideal body," the promotion of self-care within health policies and the development of related industries (cosmetics, diet food, gyms,...), stimulates the consumption of the image of the other: "Man becomes production and consumption, consuming merchandise and living utility" ] (p. 214).

In the article *Four out of Five Students in the World Are Sedentary* El Tiempo (2019). mentions that:

“The first study by the World Health Organization (WHO) on physical exercise among adolescents revealed that four out of five young people in the world are sedentary, especially girls. In Colombia there were no major variations this century. (...) While in 2001 81.7% of young men and 86.8% of women were sedentary, in 2016 the figures were 81 and 87%, respectively. In general, the sedentary lifestyle of Colombian adolescents is 83.9%.” (p. 1).

If most people know the positive impacts of exercise, what morally holds them back?

For these reasons, this research-creation aims to show how personal autonomy is consolidated through a process of moral development in which the motivation to acquire new habits of healthy living is structured through a referent on self-regulation and self-determination in line with Kant’s point of view on moral development.

Para Kant, el deber es la motivación principal para nuestras acciones morales. Cumplir con el deber nos permite actuar de manera autónoma, sin estar influenciados por nuestras inclinaciones personales o deseos. De esta manera, nuestras acciones adquieren un valor moral intrínseco, independientemente de las consecuencias o beneficios que puedan resultar. (Paragraph 9).<sup>1</sup>

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<sup>1</sup> *La visión de Kant sobre moral y razón: un enfoque fundamentado*. HISTORIOTECA. <https://historioteca.com/la-vision-de-kant-sobre-moral-y-razon-un-enfoque-fundamentado/>

[For Kant, duty is the primary motivation for our moral actions. Fulfilling duty allows us to act autonomously, without being influenced by our personal inclinations or desires. In this way, our actions acquire an intrinsic moral value, regardless of the consequences or benefits that may result.] (Paragraph 9).

This research project will link the variables by examining the relationship between an individual's physical and mental health and their moral behavior, this research project will link the variables. It will explain how these connections interact, outline the pertinent factors, compare various groups, look for potential correlations, and further establish cause-and-effect connections to explore them in schools today. The majority of people know the benefits of exercise, both physical and emotional; however, we wanted to implement this moral development project from different points of view. This project is essential because having a target population of adolescents does not mean that it cannot reach out and help anyone else at any time to incorporate this physical training routine according to their particular needs and allow the gradual internalization of healthy lifestyle habits, as well as the incorporation of discipline schemes that will enable them to improve their performance and the regulation of their emotional health.

This research would also be fundamental in the school educational system because it would help understand how regular physical activity could improve morale.

This research process has broad social relevance since the acquisition of healthy lifestyle habits has a focus on integral health and, above all, emotional and mental health issues are of utmost importance in a country that is still in the process of recognizing that these aspects must be assumed and managed in an autonomous, responsible and conscious manner. The chosen

population group of adolescents between 13 and 15 years of age is very emotionally volatile, with some tendencies to depression or anxiety due to hormonal changes, socialization processes, or processes of building their esteem.

### **Limitations**

The initial data collection instruments are response forms, which could be informal or lax in answering. The project covers a complex aspect of moral development, which may need to be better understood or internalized by adolescents, which may result in responses based more on personal preferences than on understanding the connection between physical training and moral development. Due to time constraints and the need to survey an entire class, they may have been less formal or rigorous in capturing complex responses, especially regarding the integration of moral awareness with physical exercise. Despite difficulties such as time constraints and the scope of the survey, the goal of interviewing the target sample was achieved. However, these obstacles still posed significant limitations to the study's methodology and results. However, the research concludes that more can be invested in this area.

### **Hypothesis**

There is a positive correlation between the incorporation of moral development and physical exercise among 13-15-year-old adolescents at L.T.S.M. (Liceo Taller San Miguel). Our

position suggests that adolescents who perceive the benefits of integrating moral values into their exercise routines consistently develop physical activities driven by a greater sense of responsibility and personal fulfillment.

Based on Kantian philosophy, it is proposed that there is a correlation between the cultivation of moral awareness and the practice of physical exercise among adolescents aged 13 to 15 years within L.T.S.M. The hypothesis proposes that individuals who internalize Kant's moral imperatives, particularly the concept of duty derived from pure reason, take sports practice as a categorical imperative. Therefore, physical training will be performed as an end and not a means.

### **Research Question**

Is physical exercise a categorical moral imperative, or is it a means to obtain results with aesthetics and integral health in adolescents from 13 to 15 years of age from L.T.S.M?

### **Objectives**

#### General Objective

Establish the relationship between moral development from a Kantian perspective and sports practice in adolescents between 13 and 15 years old from the LSTM.

### Specific Objectives

-To recognize the perceptions about the practice of sports that students between 13-15 years old from the L.S.T.M. have.

-To identify the criteria for self-regulation used by students between 13-15 years old regarding physical training.

-To establish whether regular physical training is conceived from the duty to be or from functional and aesthetic criteria.

### **Theoretical framework**

The following section will examine the research on physical exercise, general health, and moral development. This section provides an overview of the most relevant topics, with authors supporting this information. First of all, it is necessary to be clear about the issues that are being addressed in this research to move on to examine whether any emergence of moral development is recognized in students of this age group, laying the foundation for our research on the intertwined phenomena.

Throughout the review, one of the essential authors, such as Immanuel Kant, will structure how the categories will be developed thematically, exploring the connections between physical exercise, overall health, and moral development. Immanuel Kant emphasizes the importance of moral principles and the development of moral conscience, providing a foundation for our examination of moral development in adolescents.

Finally, in the construction of this state-of-the-art about physical exercise, overall health, and moral development, the limitations found in the process include the complexity of moral development, which may not be readily apparent to participants, potentially leading to responses influenced more by personal preference than by an understanding of moral principles. Additionally, the initial data collection instruments, such as response forms, could introduce informal or less rigorous responses. These limitations did not allow for a comprehensive understanding of the interconnectedness of physical exercise, overall health, and moral development, pointing out deficiencies in the existing literature and highlighting the need for future research.

### **Physical exercise**

#### **The concept of Regular Physical Exercise approaches its meaning**

In its classic definition, physical activity is defined by [WHO] as:

Any bodily movement produced by skeletal muscles that requires energy expenditure. Physical activity refers to all movement, including during leisure time, for transport to and from places, or as part of a person's work. Both moderate- and vigorous-intensity physical activity improve health.”(World Health Organization], 2010, First paragraph).

Therefore, this research will refer to the specific fact of an activity that generates movement and can improve physical well-being. However, such activity cannot be isolated; it must occur systematically (which will be referred to in this text as regularity) and suggests the

need for planning and the need to have spaces where: “exercise is that which is planned, structured, and repetitive physical activities that aim to improve and maintain physical fitness” (Caspersen et al., 1985 as cited in Herting et al., 2017, p. 1 ).

Although the aim is to structure spaces for physical activity, this must go beyond considering only energy expenditure, a demand for caloric expenditure. The objective is to resize the exercise to be regular, adjusted, systematic and planned.

### **Development of physical exercise according to individual needs**

The purpose of the research is not to assume or take for granted that there are standardized routines and frequencies; what we want to achieve is to make people aware that physical exercise, although it is optional, under the approach of this research to assume it, internalize it and carry it out through the incorporation of habits constitutes the duty to be from the Kantian moral perspective. Physical exercise must then respond to intentionality and have a precise frequency so that it can be established as a healthy habit; this means that activities that are not systematic are outside of what this research considers a healthy habit.

The individual needs are subject to the primary health conditions, both physical and emotional.

It is necessary to start with a previous diagnosis to determine the individual needs and, based on that, define realistic goals and plan the training spaces.

According to Del Conde, López y Velasco (2022)

Una tendencia en los resultados muestra que aquellas personas que realizan menos de una hora de ejercicio a la semana o no lo realizan en absoluto, presentan niveles significativos de estrés que afectan directamente tanto en su autoestima, como en su autoconcepto, principalmente en las dimensiones emocional y física. (Paragraph 36, quoting Cázares (2014).

[The results show a trend showing that people who exercise less than one hour a week or not at all present significant levels of stress that directly affect their self-esteem and self-concept, mainly in the emotional and physical dimensions.] (Paragraph 36, quoting Cázares, (2014)

## **Overall health**

### **An approximation to the concept of well-being**

The World Health Organization (WHO) defines health as "a state of complete physical, mental and social well-being and not merely the absence of disease or infirmity" (2022, p. 1). However, Song and Shi (2022) state that "emerging evidence reveals that playing sports can be beneficial to health, but the relationship between sports participation and self-assessed general health has not been clearly established in children and adolescents" (First paragraph). Although the research aims to create spaces to promote physical exercise, it is also of general interest to assess physical activity participation and general health in adolescents.

Well-being is essential in research, taking into account research such as the [WHO], which proposes that well-being is not only the absence of illness but something more

fundamental, which gives it a deeper meaning. This allows the research to look at a comprehensive concept that has not been researched much, enabling it to investigate more about general well-being.

### **Mental health**

Sports activity is the most appropriate means to develop motor skills and improve mental functions such as cognition, memory, and abstract thinking through notions of speed, distance, depth, and strength (Gomez et al.,2012); therefore, maintaining levels of physical activity or starting a physically active routine could be essential to decrease the risk of developing symptomatology related to stress, anxiety, and depression, which are baseline cognition processes (Del Conde et al.,2022).

In conclusion, the mental health subcategory emphasizes the fundamental role that physical exercise plays in promoting emotional well-being and cognitive functions. Understanding individual needs and adapting exercise routines accordingly contributes not only to physical fitness but also to emotional and mental fitness.

### **Emotional health**

More and more research is proposing a direct relationship between physiology and the management of emotions. According to Bilbao (2013), neurons are oxygen guzzlers, so the brain needs a strong heart and arteries in perfect condition to function at total capacity. For this reason, this author confirms that regular moderate aerobic exercise is a first-level factor in preventing brain deterioration, neuronal death, and other aging-related alterations. Likewise, physical activity allows an endocrine-type regulation, allowing the secretion of chemical substances

associated with the sensation of well-being. “Al realizar cualquier tipo de actividad física, el cuerpo segrega hormonas y neurotransmisores (endorfina, serotonina) que nos hacen sentir bien.” (Bilbao, 2013, p.1).

["When performing any type of physical activity, the body secretes hormones and neurotransmitters (endorphin, serotonin) that make us feel good."] (Bilbao, 2013, p. 1).

In addition, physical activity allows a substantial improvement in self-acceptance and self-perception, which results in better levels of self-esteem. Haugen, Säfvenbomb, and Ommundsena (2011) state that increased physical activity levels can be beneficial given the improved perception of physical self-esteem. As Adewunmi (2023) mentions: “Mental and physical health are equally important components of overall health. For example, depression increases the risk of many types of physical health problems, particularly long-lasting conditions like diabetes, heart disease, and stroke. Similarly, the presence of chronic conditions can increase the risk of mental illness” (Paragraph 2).

## Moral Development

### Approximations to the concept of morality according to Kant

Kant. E (2003) en su obra *fundamentación de la metafísica de las costumbres* menciona que “ni en el mndo ni en general, tampoco fuera del mundo, es posible pensar nada que pueda considerarse como bueno sin restricción, a no ser tan solo una buena voluntad” (p. 8).

[“Neither in the world nor in general, nor outside the world, is it possible to think of anything that can be considered as good without restriction, unless it is only a goodwill”] (p. 8).

Therefore, the only good thing is that which is done without medications or conditions, so to aim at a morally good action, it is necessary to act out of duty.

The categorical imperative, in one of its forms, states that: “Obra sólo según una máxima tal que puedas querer lo mismo que se torno ley universal (Kant, 2003, p. 24).

[“Act only according to such a maxim that you can will the same that it becomes universal law”] (Kant, 2003, p. 24).

By this, Kant means that we act when a law obliges us, that is, out of duty, but this duty must be imposed autonomously by the person. For this, a rational, solitary exercise must be conducted on how his action will affect the world. That is why it is essential to use a Kantian maxim, which, in short, is obliged to act according to the imposed maxim regardless of the

conditions, and that must be fulfilled even with the implications of fulfilling it. Acting by a maxim is a proposition or a statement that is placed as a law. It will always be fulfilled because it was rationally chosen. This also shows the fundamental importance of sports or exercise, which are not only a way to become healthy. These two concepts are not a means to become healthy, but sport is good because it does not affect other people and sees people as an end in themselves.

## **Intrinsic Motivation**

The acquisition of the habit is the materialization of the moral approach and the Kantian duty to be materialized through a habit. To evidence the Kantian duty to be, in this research, the habits and routines are established as the way to exemplify this approach. However, the internalization of the habits is variable for each person; therefore, there is no single way to establish a routine. The proposal is flexible, which allows for a high range of adaptation according to needs, expectations, and individual conditions. Life habits are, as Bilbao (2013) states, “patrones de comportamiento que se han aprendido durante largos periodos. Generar un estilo de vida física y emocionalmente más saludable para alcanzar un mayor bienestar requiere generar nuevos hábitos, y aquí está la clave del éxito” (p. 23).

[“patterns of behavior that have been learned over long periods. Generating a physically and emotionally healthier lifestyle to achieve greater well-being requires generating new habits, and here is the key to success.”] (p. 23).

## **Self-regulation**

In terms of Garces (2015), in relation to Aristóteles in Nicomachean Ethics, he defines virtue as a balance between extremes, promoting moral excellence and ethical adaptability in our lives. Searching for the right middle ground in our actions and passions, we cultivate a virtuous life that strives for the best and highest in ethical and moral terms. The text highlights the importance of virtue as a middle ground between two extremes: one of excess and the other of defect. Instead of falling into these extremes, virtue searches to find the proper and

necessary balance in our actions and emotions. This involves avoiding both lack and excess in our behaviors and attitudes.

Kant. E (1784) points that:

La minoría de edad estriba en la incapacidad de servirse del propio entendimiento, sin la dirección de otro. Uno mismo es culpable de esta minoría de edad cuando la causa de ella no yace en un defecto del entendimiento, sino en la falta de decisión y ánimo para servirse con independencia de él, sin la conducción de otro. ¡Sapere aude! (p. 1).

[Minority of age lies in the inability to use one's own understanding without the direction of another. One is guilty of this minority of age when the cause of it does not lie in a defect of the understanding but in the lack of decision and courage to use it independently, without the guidance of another. Sapere aude!] (p. 1).

“(...) Immanuel Kant’s, who provided an account of autonomy as a moral concept linked to self-governance; in Jerome B. Schneewind’s words, Kant “invented the conception of morality as autonomy” which replaced earlier notions of morality as obedience (1998, 3–4)” (Fifth Paragraph).

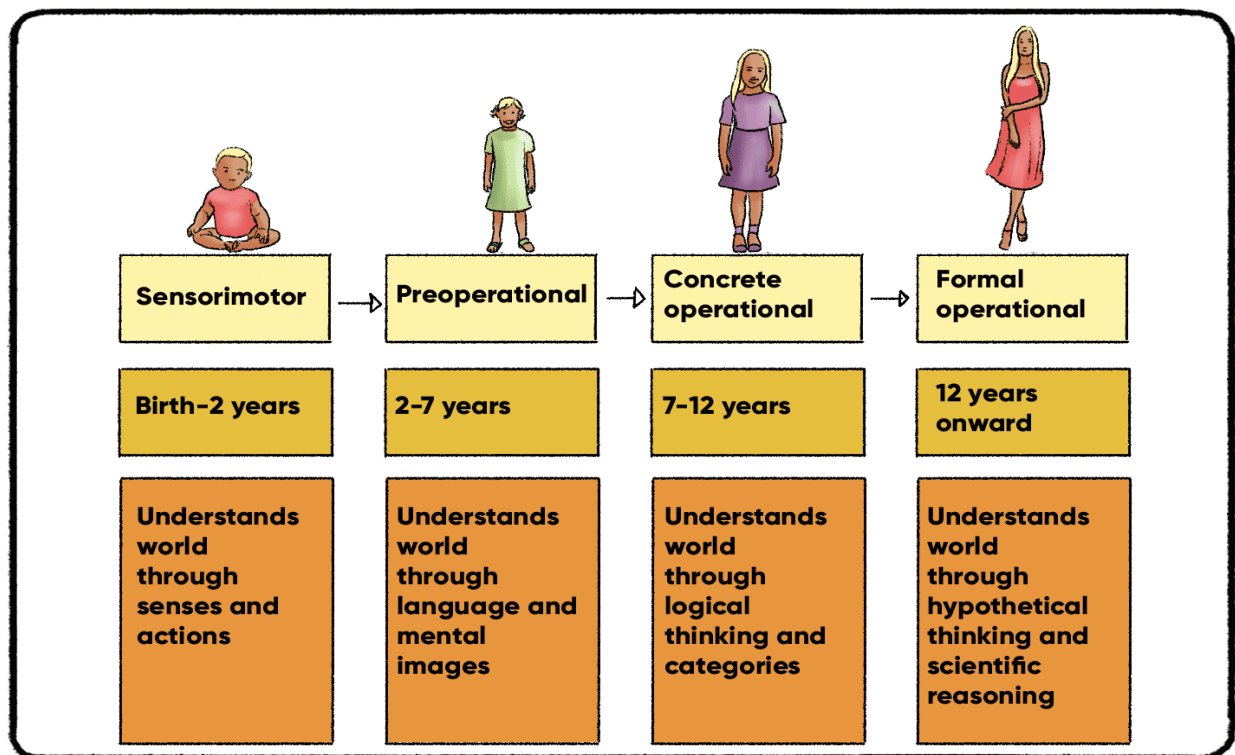
Kant's concept of autonomy as a moral principle linked to self-government implies a move away from obedience-based morality. It advocates a more rational, self-directed, and reflective approach to moral decision-making that moves away from dogmas and canons imposed by others. This change invites individuals to take responsibility for their moral decisions

through reasoned judgment and critical engagement with moral principles. Therefore, acting following others simply means not having moral autonomy.

## Approaches to moral development from Jean Piaget

**Figure 1**

*Stages of moral evolution according to Piaget*



*Note. Piaget's Theory of Cognitive Development. (2023, 10 octubre). Practicalpie.*

<https://practicalpie.com/piagets-theory-of-moral-development/>

Practical Psychology (2023) states that:

Jean Piaget identified stages of moral development in which a child adheres to rules and makes decisions. Piaget was mainly interested in children's understanding of moral issues: rules, moral responsibility, and justice. The stages at which children understand rules correlate with cognitive development. (Paragraph 3).

Piaget's theory of moral development is assumed in this work as a way to contrast the Kantian model. While Piaget affirms that there is a direct relationship between cognitive and moral development, the "autonomy" stage is the phase that begins after the age of 10, where children understand that there are normative agreements that can be questioned as long as they have the approval of the instance that generates the norm or that it also plays a vital role to understand the initial intention in front of a particular action. At the same time, the Kantian approach assumes morality as a rational matter where emotions and experience do not condition moral action.

It was considered necessary to consider Piaget to have an alternative way of assessing the research categories of autonomy and self-regulation to have another possibility of understanding the actions of the adolescents interviewed. However, the notion of the categorical imperative is the central theoretical source of the research process.

### **Methodological Framework:**

Although people know the importance and benefits of physical activity both for physical health and to treat emotional problems because it is talked about all the time through social networks, media, and medical recommendations, healthy lifestyle habits are not established that autonomously allow internalizing that if you want to have good overall health, physical activity has to be an active component in personal life.

This research process has broad social relevance because the adoption of healthy lifestyle habits has an integral approach to health and, most importantly, emotional and mental health issues are of utmost importance in a country that is still in the process of realizing that these aspects must be addressed and managed independently, responsibly, and consciously. The selected population group of adolescents between 13 and 15 years of age is very volatile emotionally, with some tendencies to depression or anxiety due to hormonal changes, the socialization process, or the process of building their self-esteem. In this context, authors like (Arana and al. 2023), a specific reference to healthy habits in adolescents, which is the target population of the research: "Physical inactivity, poor eating habits and the practice of harmful leisure activities are today among the fundamental problems of global society. Therefore, it is necessary to generate good healthy habits in the adolescent population, to ensure that they establish healthy behaviors and reach adulthood with good biopsychosocial health" (p, 2).

The methodological framework is of utmost importance because it provides scientific rigor, helps to define the object of study, and allows planning times and compliance with work schedules; emotional education is a complete subject of a multidisciplinary approach; therefore,

it must be delimited for research purposes, in this order of ideas the methodology allows to establish more clearly the object of study to define the categories in which the project is framed:

1. Integral health (Physical, Mental, and Emotional health).
2. Physical activity (The concept of Regular Physical Exercise, approaches to its meaning, and Development of physical exercise according to individual needs).
3. Moral development (Approximations of the concept of morality according to Kant, Intrinsic motivation, and Self-regulation).

The methodological framework is structured with objectives defining each project's phases.

Search for secondary information (review of publications, journals, articles, databases, and official reports of public entities). Interpret texts, analyze arguments, understand statistics on emotional and physical health (published by researchers and public health institutions), compare data, and establish categories of analysis.

This research focuses on defining a comprehensive statistical study in terms of access, cooperation, moral considerations, validity, data quality, time/resources, external factors, and complexity of data analysis. The results are influenced by relative size and external influences such as family, friends, and relatives. The research aims to provide a rigorous methodological

approach that concretizes the art of research and ethical framework and helps understand and improve young people's moral development concerning physical exercise.

This research project is highly relevant to our field of study. We are investigating how making healthy choices and dealing with emotions are all linked. Our findings can help us understand how to improve the well-being of young people and examine their moral development. This, in turn, can have a positive impact on society by guiding the development of better policies, programs, and educational approaches for young individuals, with the goal of fostering healthier, happier, and more morally conscious because adopting physical exercise habits not only influences physical health, can also act as a catalyst for habit building in other areas of life, including morality.

By committing ourselves to regular physical activity, we cultivate discipline, perseverance, and self-control, which can extend beyond exercise. They can positively influence our decision-making and form solid moral habits. In short, the consistent practice of healthy habits, such as exercise, can be a starting point for the comprehensive development of ethical and moral behaviors in our daily lives.

Some potential challenges in collecting data may be that the information provided by the surveys and interviewees may need to be more truthful, which will cause inconveniences during the investigation. Another cause may be that they need to take the research carried out seriously or the questions we will ask and do not answer concretely or honestly. A solution proposed by us to generate answers with a good impact on the research is to create previous trust before asking the questions, talk about the importance of the "senior project" with the interviewees, and let them know that their answers will help to develop a research. For this, we need the best disposition. We will do the surveys with all the students per room that meet the data we are

looking for, such as the person interviewed has an interest in exercise or physical activity and can tell us about their experiences; on the other hand, we think of selecting people who do not perform physical activity but generate an interest in particular (quota sampling). This means that in the end, we will have two different groups of people who can provide helpful information. Quota sampling is a non-probability sampling technique where researchers select a convenience sample of people who are representative of the population. Researchers chose these people based on specific characteristics. They determine and set quotas for the market research samples to help gather data. From these samples, the objective is to extrapolate to the total population. The final subgroup will be selected to obtain more in-depth data.

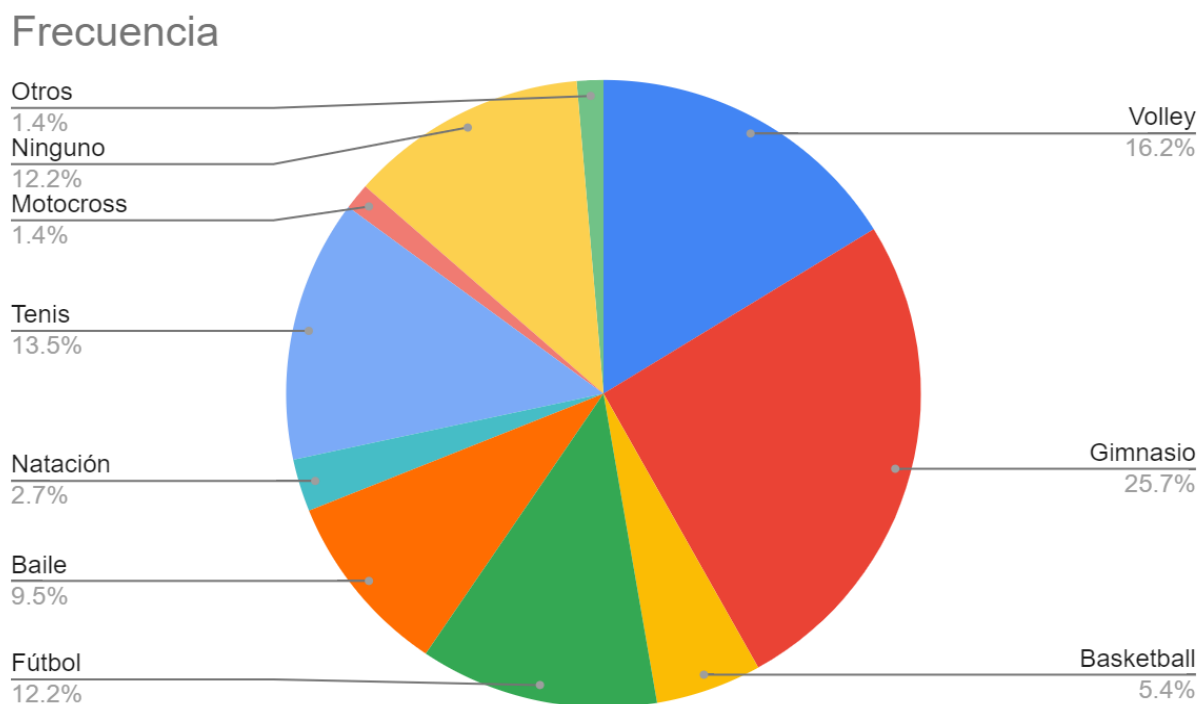
The students of the Liceo Taller San Miguel (between 9th grade and 10th grade) will be the population to work with. Exclude those younger grades because they do not have a strong sense of morality or are simply in that development. Having a size that allows a complex analysis is essential for the data. Still, it is also important to use time efficiently and to be sure that all surveys are of high quality; that is why the size ensures complete data with quality surveys, instead of increasing the number, having a poor quality of surveys, and having less time to have a deep analysis of the surveys, that is to say, that all students per classroom will be surveyed (9-10). However, the actual size of the surveys will be a maximum of 70 students. The surveys will advise that all responses will be kept private and will only be discussed with that person if they authorize an interview in the event they are needed. The interviews will be semi-structured and divided into two groups: one group of people who dedicate a large part of their time to physical exercise and who find it related to moral development, and the other group who do not. The two groups will be of a population of 4 people, considering the degree of complexity

of what an interview means, which is a conversation in a trusting environment that seeks to ask other types of more in-depth questions that were not included in the surveys.

## **Results**

### **Data Analysis of Surveys**

The general research of 66 samples employed various methods to explore in 9 and 10 grades how overall health relates to morality. Simple stats were used to describe the data, while qualitative coding helped understand participants' moral beliefs regarding different categories. Comparative analysis looked at differences or similarities between both groups. Also, participant consent, privacy, and ethical guidelines were ensured. Following school policies emphasized our commitment to ethical research. The questions were asked in Spanish because we wanted to obtain more in-depth information and because it is the native language of these students; therefore, they will be more open, and data will be received with greater clarity. However, the notes of each figure were synthesized into English, the language in which this research was carried out. The surveys took approximately 5 minutes to answer each one, as was held to interview all the students in the classroom, with the teacher's authorization; what was done was to call them in groups of 3, and when they finished, they were asked to call another 3.

**Figure 2***Types of exercise performed*

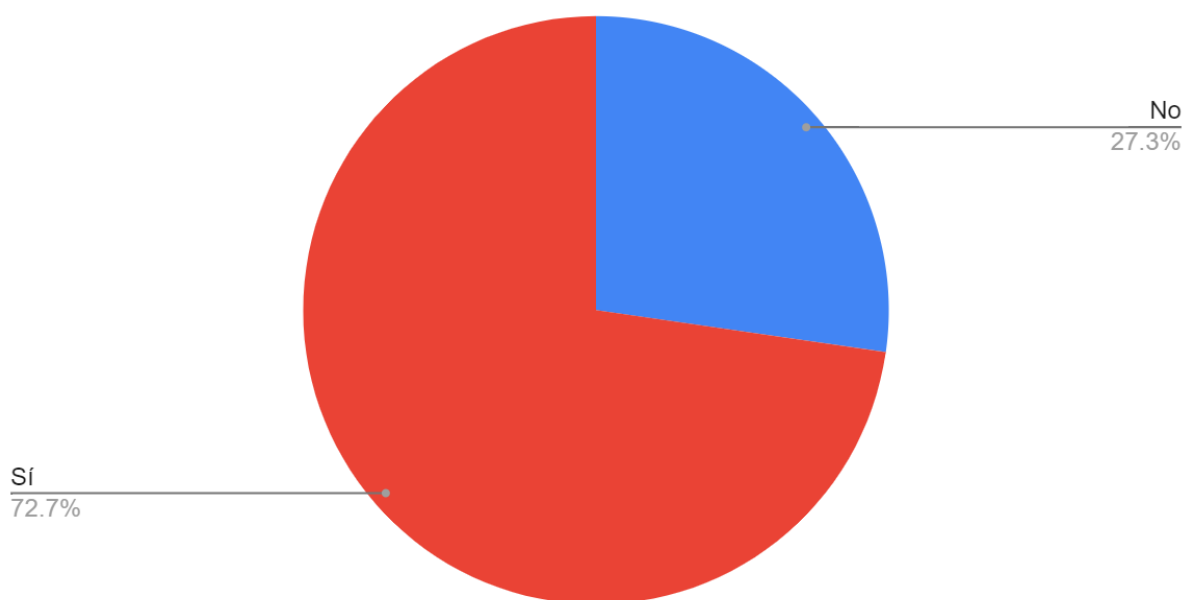
*Note.* A survey was conducted in 9th and 10th grades, asking about the types of physical activity most likely to be undertaken by students and made by frequency to filter out matched data.

The graph shows that 86,5% of the sample practice any kind of physical activity, the most popular being the Gym, with 25.7% among all the persons who practice physical activities, and the least popular is motocross, with 1.4%; furthermore, a (13.64%) practice more than one physical exercise.

**Figure 3**

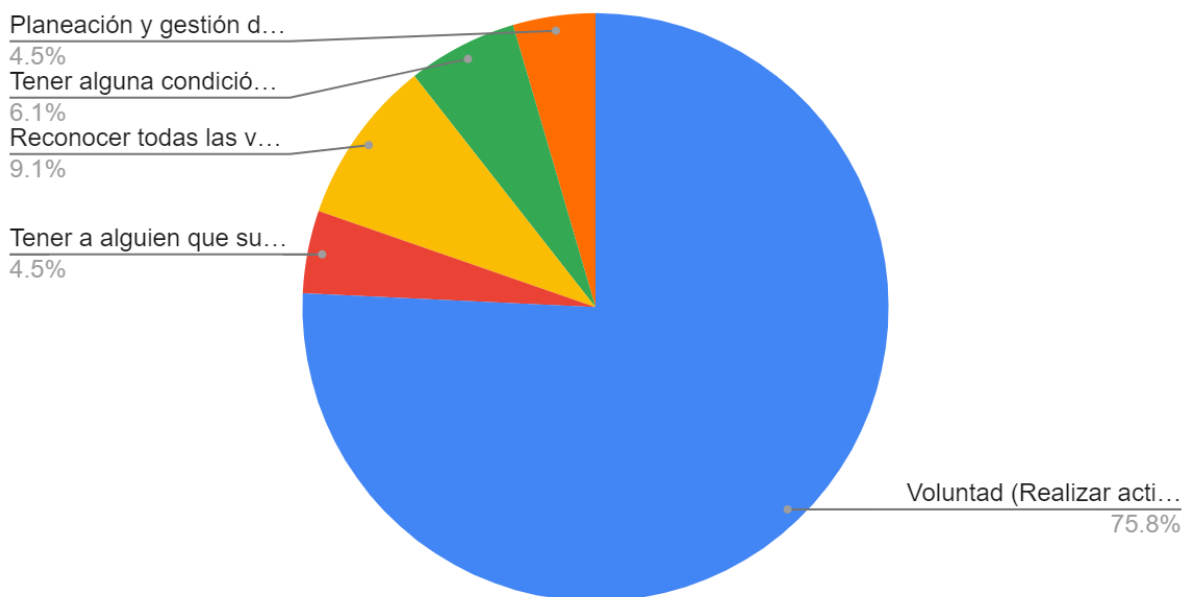
*Explicit recognition of exercise benefits to integral health (physical, mental, and emotional) before performing physical activities*

Recuento de ¿Cree usted que para realizar actividad física, se necesita reconocer con claridad los beneficios que trae a la s...



72.7% agree that it is necessary to clearly recognize the benefits of physical activity to integral health (physical, mental, emotional). However, the other 27.3% disagree with this question.

Recuento de Cree usted que para que una persona sedentaria, inicie un proceso de actividad física se necesita:



**Figure 4**

*What is necessary to initiate a process of physical activity?*

*Note.* A survey was conducted on 9—and 10-grade students about what is necessary for them to initiate a process of physical activity.

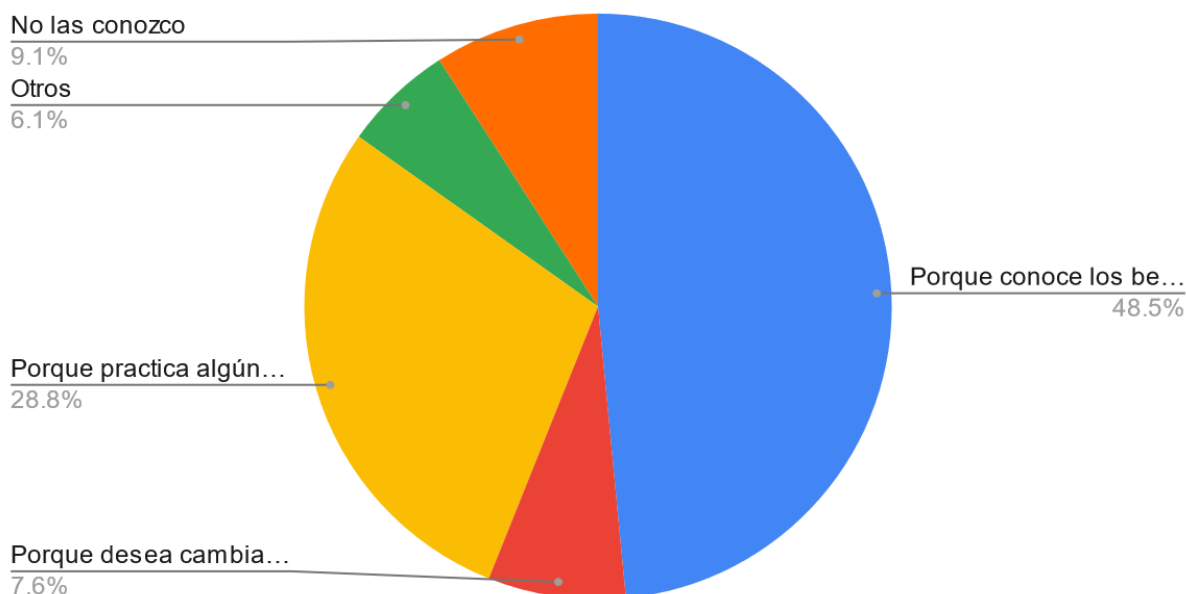
It is evident that the respondents chose the response of Willingness (Performing physical activity for their own motivation) the most, with a percentage of 75.8%. The next one corresponds to recognizing all the advantages physical activity generates in integral health, with a sample of 9.1%. The remaining 15.1% pertains to suffering from a health condition requiring

physical activity for recovery, planning and managing free time, and recognizing all the advantages physical activity generates in integral health.

**Figure 5**

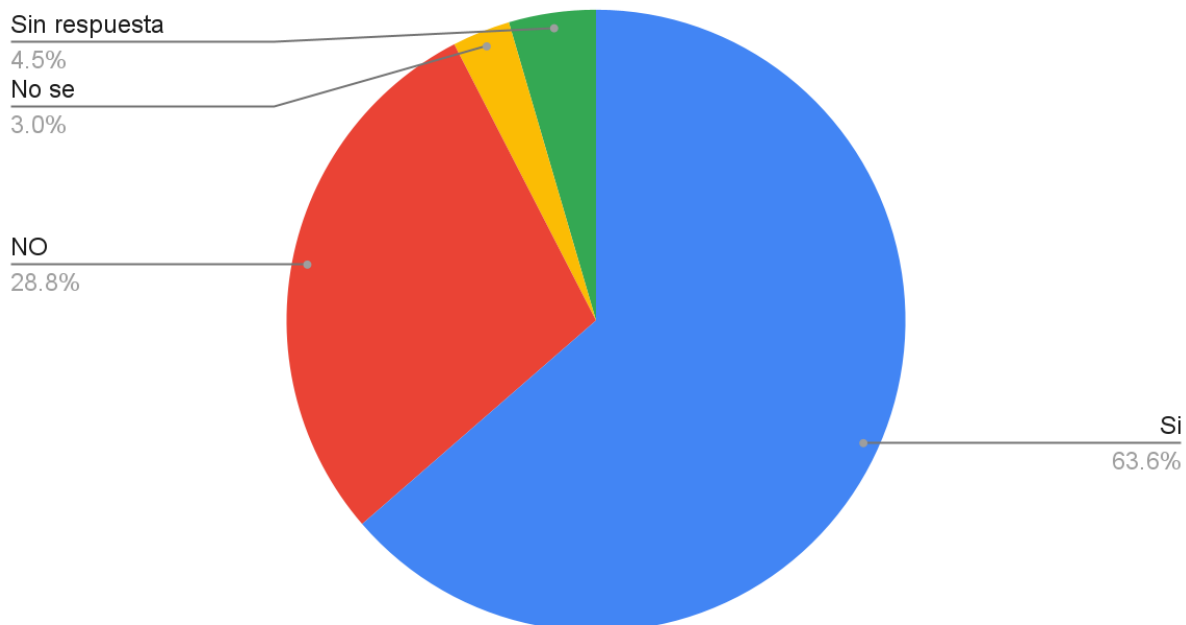
*Reasons why students exercise*

Recuento de ¿Cuáles son esas razones por las que se ejercita o desarrolla algún tipo de actividad física?



*Note.* A survey was conducted on 9—and 10-grade students to analyze why they develop some type of physical activity.

The data shown in the graph indicate that the most selected reason students do physical activity is due to the knowledge of the physical, mental, and emotional benefits, with 48.5%. The second most selected value is the reason for practicing some sport, 28.8%. The other 22.7% corresponds to the desire or intention to change their body, with 9.1%, and the missing value is due to different reasons.

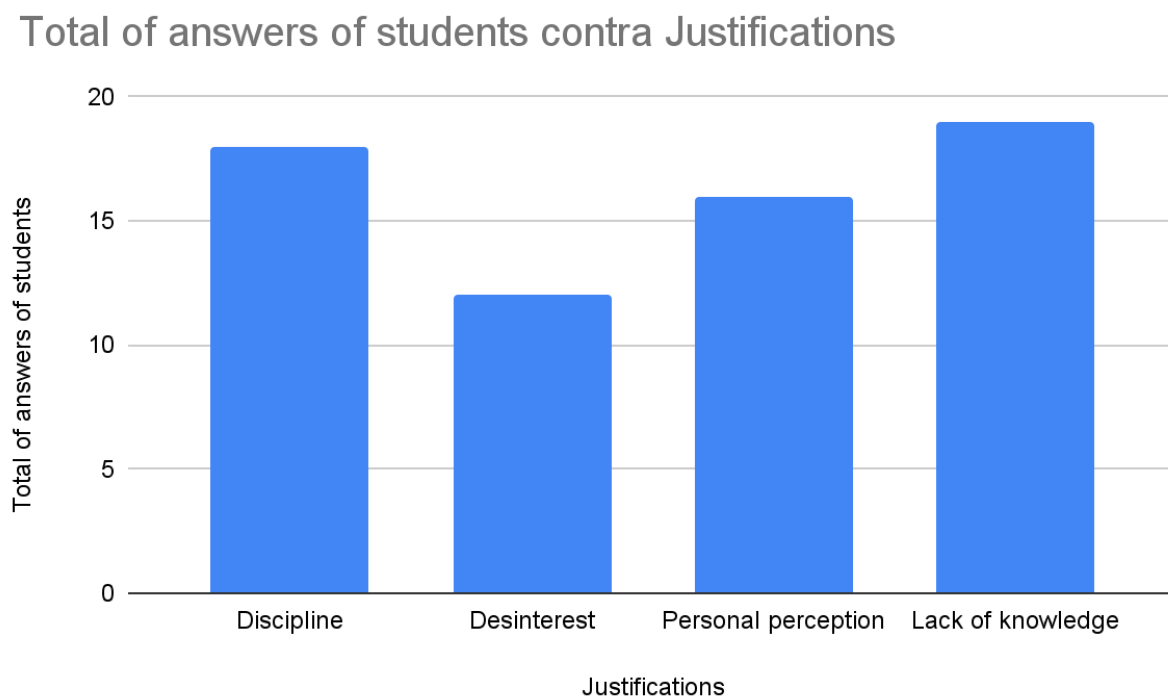
**Figure 6***Moral Development and Physical Exercise***Frecuencia**

*Note.* A survey was conducted to analyze whether 9— and 10-grade students thought there was a relationship between physical exercise and moral development. A frequency had to be used to indicate the specific data.

The data shown by the pie chart demonstrates that the majority of the groups (63.6%) agree that there is a clear relationship between moral consciousness and physical exercise. Although (28.8%) don't think these concepts have a relationship. In addition, (7.5%) don't know or didn't provide an answer about whether they believe it is a relationship or not.

**Figure 7**

*Justification of answers according to Figure 6*



*Note:* The responses were grouped by categories, which were disciplines, disinterest and personal perception and ignorance according to the survey in Figure 6, which was conducted on 9- and 10-grade students.

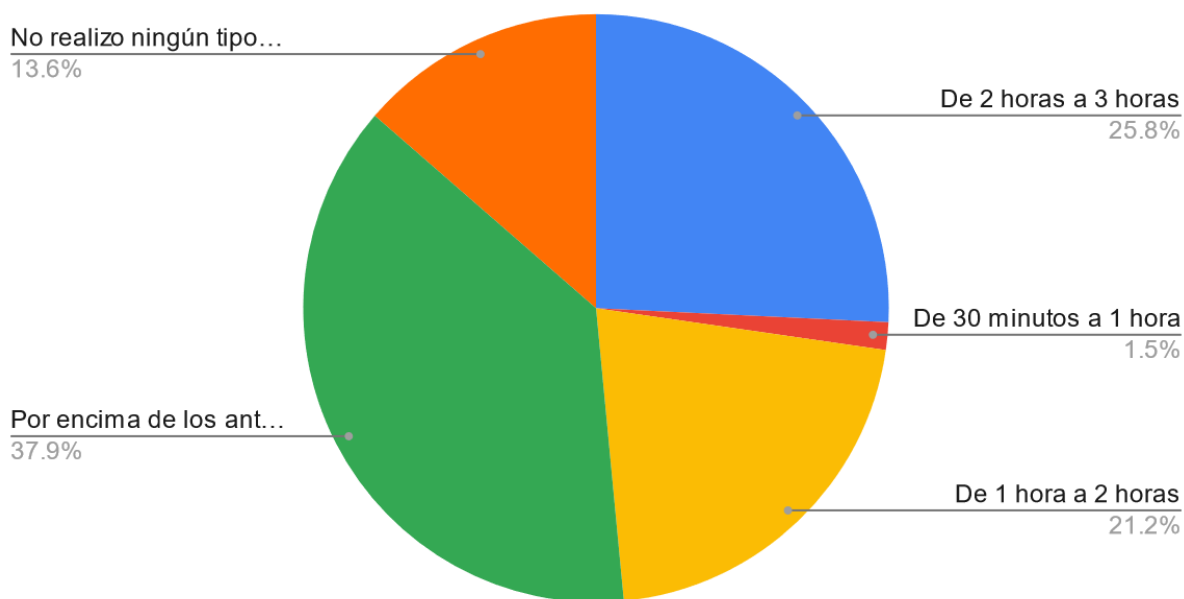
In order to determine if there was a relationship between physical exercise and the moral development of the students, the topics on which most of the answers were based were categorized. The personal perception related to the possibility of bodily changes in an aesthetic framework and the individual evaluations that the interviewed individuals have of physical exercise (16). Discipline, this category of analysis is related to the management of time and planning to attend a sport practice on a regular basis (18), Disinterest, which does not have any

positive or negative mobilization towards physical activity and finally the category of Lack of knowledge, which indicates that they did not have an adequate understanding of the question (19).

### Figure 8

*Weekly frequency dedicated to physical activities*

Recuento de ¿Cuál es la frecuencia semanal dedicada a la actividad física?



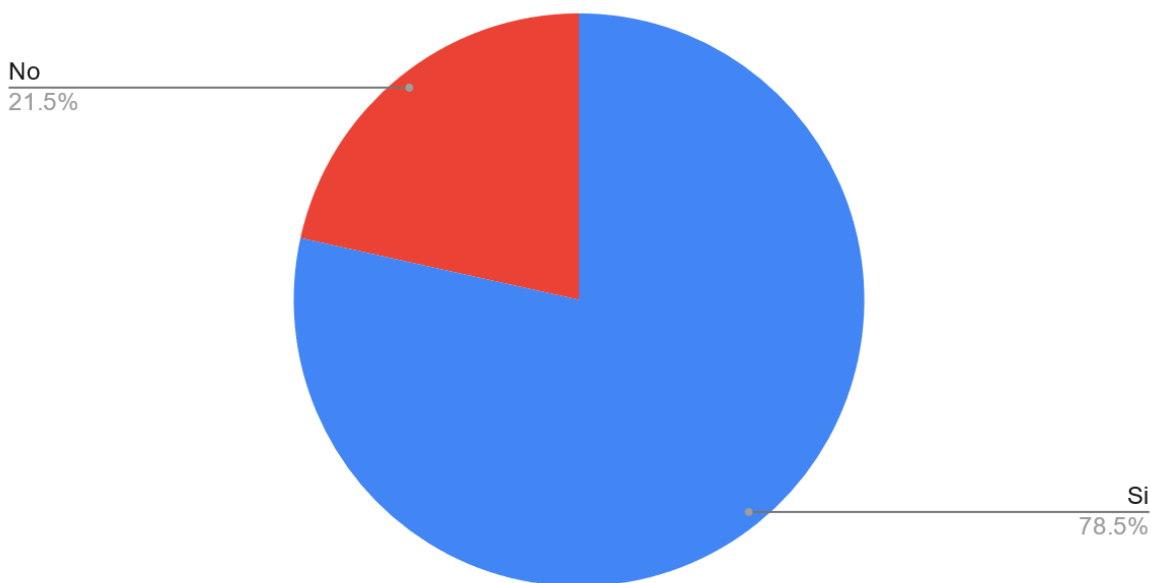
*Note.* A survey was conducted in 9th and 10th grades, analyzing weekly frequency dedicated to physical activities.

37.9% of respondents said they performed 3 hours or more sports during the week. The following highest percentage corresponds to 2 or 3 hours, with 25.8%, and the remaining 37.8% do between 1 and 2 hours and no physical exercise at all.

### Figure 9

*Authorization of students to researchers*

Recuento de ¿Autoriza a los investigadores a realizarle entrevistas en caso tal de que sea necesario?



*Note. A survey was conducted in the 9th and 10th grades, analyzing the number of students authorized to be interviewed in case we need to do so.*

Not all students agreed to be interviewed if necessary (21.5%), but the majority said yes (78%).

### **Data Analysis of the interviews**

In the surveys, all respondents were asked if they agreed to be interviewed if necessary, as seen in Figure 9. A total of 4 people were chosen to be interviewed, people who decided to use this means of research. The surveys yielded vital information to determine and filter specific characteristics regarding students' physical activity in grades 9 and 10. The questions were classified into two sections: one of the students who DO perform a physical exercise with particular positive characteristics, and the other question the people who DO NOT perform any physical activity. The total number of people who do some type of physical activity is 86.4, Victor Manuel Martínez and Cristobal Apellido were randomly selected, and 12.2% of the people who said they do not exercise, Manuela Gallego and Salome Saavedra were also randomly selected.

#### **The ones who DO**

- 1. ¿Después de realizar actividad física, siente una mejora considerable en su estado de ánimo?**

**Estudiante #1 (10A):**

“—Pues claro que sí, aunque depende mucho de sí se logró el objetivo del momento de la actividad física, pero en su mayoría es como sentirse bien por el hecho de haber logrado mantener una actividad física bien realizada.” (Fragment of annex).

["—Well, of course, it does, although it depends a lot on whether the goal of the moment of physical activity was achieved; for the most part, it's like feeling good about the fact that you've managed to maintain a well-performed physical activity."]

**Estudiante #2 (9A):**

“—Sí claro, pues me siento mejor después de hacer ejercicio” (Fragment of the annex).

[“—Yes, of course, because I feel better after exercising.”]

**2. De ser una sensación positiva (de bienestar) ¿Cómo la describiría?**

**Estudiante #1 (10A):**

“—Cómo sentirse orgulloso de un avance personal, físico y también sentirse bien de cómo se siente ahora y comparar por ejemplo con fotos y cosas anteriores es bastante, pues podría decirse emocionante o satisfactorio.” (Fragment of Annex).

[“—Like to feel proud of a personal, physical advancement and also to feel good about how you feel now and to compare, for example, with previous pictures and things, which is quite, well, you could say exciting or satisfying.”]

**Estudiante #2 (9A):**

“—Pues en el momento siento que hice algo en el día, pues uno se siente bien” (Fragment from the annex).

[“—Well, at the moment, I feel like I did something during the day, so I feel good”]

**3. ¿Cree que hacer deporte se relaciona de manera directa, con una forma de disciplina personal o se trata solo de una experiencia de disfrute?**

**Estudiante #1 (10A):**

“—Pues mayormente podría ser las dos, sin embargo, claro que conlleva mucho con la disciplina, porque el ejercicio o las actividades físicas son de constancia y sin la constancia no se logra un objetivo, no se logra llegar a nada. Sin embargo, uno puede disfrutar mientras hace.”

(Fragment from the annex).

[“—Well, mostly, it could be both. However, of course, it entails a lot of discipline because exercise or physical activities are about constancy, and without constancy, you don't achieve a goal; you don't achieve anything. However, one can enjoy it while doing so.”

**Estudiante #2 (9A):**

“—Pues depende si por ejemplo si yo hago deporte como fútbol puede ser de diversión pero si es de disciplina puede ser trabajar todos los días una hora como cuando una va al gimnasio todos los días a la misma hora ahí se ve la disciplina.” (Fragment from the annex).

[“—For example, if I play sports like soccer, it could be for fun, but if it is discipline, it could be working every day for an hour, like when you go to the gym every day at the same time, that's where you see the discipline.”]

**4. ¿Considera que para un adolescente es complicado planificar su tiempo libre para hacer algún tipo de actividad deportiva?**

**Estudiante #1 (10A):**

“—Pues sí, claro, porque por ejemplo, si uno tiene la presencia de alguien que también le ayude a uno a planificar el qué va a hacer o cuándo va a practicar y todo eso, es complicado para uno solo hacer todo el plan y tener el tiempo y mirar cómo hacer las cosas sin ayuda de otras personas.” (Fragment from the annex).

[“—Well, yes, of course, because, for example, if you have the presence of someone who also helps you to plan what you are going to do or when you are going to practice and all that, it is complicated for one alone to make the whole plan and have the time and see how to do things without the help of other people.”]

**Estudiante #2 (9a):**

“—Pues para mi ha sido muy complicado organizarlo por la jornada que tiene el colegio y como yo he estado en volleyball pues es muy difícil encontrar la hora, también es complicado encontrar el transporte” (Fragment from the annex).

[“—It has been very complicated for me to organize it because of the school's school day and because I have been in volleyball, it is challenging to find the time, and it is also complicated to find transportation”]

**5. ¿Cree que existe algún tipo de relación entre el entrenamiento físico y la salud emocional, o cree que son aspectos independientes que deben ser tratados de manera independiente?**

**Estudiante #1 (10A):**

“—Pues en mi caso particular siento que se llevan mucho de la mano, porque a mí el hecho de hacer ejercicio y de compartir con mis amigos y ver mi mejora y todas esas cosas me hacen sentir bastante feliz y bastante bien conmigo mismo.” (Fragment from the annex).

[“—Well, in my particular case, I feel that they go hand in hand because for me, the fact of exercising and sharing with my friends and seeing my improvement and all those things make me feel quite happy and quite good about myself.”]

### **Estudiante #2 (9A):**

“—Pues yo personalmente, yo tenía obesidad osea, yo estaba con sobrepeso y pues yo me sentía mal por estar gordo entonces pues si tiene que ver la salud mental. osea cuando uno siente que hace ejercicio pues uno siente que está haciendo algo para mejorar y mejorar la disciplina.” (Fragment from the context).

[“—I personally had obesity. I mean, I was overweight, and I felt bad for being fat, so it has to do with mental health. i.e., when you feel that you exercise, you feel that you are doing something to improve and improve your discipline.”]

### **The ones who do NOT**

#### **1. ¿Qué concepto tiene del entrenamiento físico?**

**Estudiante #3 (10A):**

“—Pues de lo que yo sé del entrenamiento físico es algo que nos pueda ayudar a ser como un tipo de crecimiento personal o para mejorar un tipo de acondicionamiento o algo parecido.”

(Fragment of the annex).

[“—Well, from what I know, physical training is something that can help us grow personally or improve a type of conditioning or something like that.”]

**Estudiante #4 (9B):**

“—El concepto que tengo del entrenamiento físico es que es muy bueno para la salud, pero no, no lo implemento en ni en mi día a día. Debido a que no puedo hacer muchos entrenamientos físicos.” (Fragment of the annex).

[“—The concept I have of physical training is that it is perfect for health, but I don't implement it in my day-to-day life. Because I can't do a lot of physical training.”]

**2. ¿Considera que realizar alguna actividad deportiva tiene influencia sobre la salud integral?**

**Estudiante #3 (10A):**

“—Sí, porque yo digo que al hacer ejercicio, podemos tipo cambiar una mentalidad, tener más motivación para hacer otras actividades más energía como un punto de vista diferente.”

(Fragment of the annex).

[“—Yes, because I say by exercising, we can kind of change a mindset, have more motivation to do other activities more energy like a different point of view.”]

**Estudiante #4 (9B):**

“—Eh Sí. Debido a que puede ayudar a algunas enfermedades o incluso a algunas cosas mentales.” (Fragment of the annex).

[“—Uh Yes. Because it can help some diseases or even some mental things.”]

**3. ¿Qué podría modificar para incorporar la actividad física dentro de sus hábitos de vida?**

**Estudiante #3 (10A):**

“—Pues los horarios no siempre son los adecuados como para tener motivación o para que las actividades sean más fáciles de realizar.” (Fragment of the annex).

[“—Well, the schedules are not always adequate to have the motivation or to make the activities easier to do.”]

**Estudiante #4 (9B):**

“—Eh, de pronto, eh, empezará a mirar lo positivo en hacer ejercicio.” (Fragment of the annex).

[“—Uh, all of a sudden, uh, you'll start to look at the positives in exercising.”]

**4. ¿Crees que si tuvieras a alguien que le reforzará de manera permanente, la implementación de un plan de entrenamiento, podrás cambiar tus hábitos de vida?**

**Estudiante #3 (10A):**

“—Sí, ya que esa persona, pues me así, como dije, me daría motivación. Y al verla a ella, yo estaría como contenta, como de ver un cambio o de realizar algún tipo de entrenamiento personal, el entrenamiento diferente a lo que como en la cotidianidad.” (Fragment of the annex).

[“—Yes, since that person, well, that would, like I said, give me motivation. And seeing her, I would be kind of happy, like to see a change or to do some kind of personal training, training different from what I eat daily.”]

**Estudiante #4 (9B):**

“—Eh Porque eso podría ayudarme a sentirme como más ayudada para conocer.”

(Fragment of the annex).

[“—Eh, Because that might help me feel like more helped to know.”]

### **Discussion of results**

The age selection was from 13 to 15 years old, located according to Piaget's theory in a range of concrete operations, where there is already a use of logic to interpret or understand the phenomena and experiences of their daily lives, with the possibility of understanding abstract formulations and a clear distinction between their actions and the consequences they may face. From this perspective, all the students in the sample recognize that physical activity is suitable for their integral health; they all recognize the need to plan and manage free time, which is explained by their stage in moral development according to Piaget, but not from Kant, Since sports practice cannot be evidenced as an exercise of autonomy per se since there was always an association to aesthetic results, which makes exercise to be seen as a means and not as an end in itself.

In the interpretation of results, a direct relationship can be inferred between the aesthetic standards promoted by social networks and media and sports practice; even training spaces are used in many cases as spaces for socialization and measurement of social status, outside the moral imperatives of a sports practice as a duty to be.

For the evaluation of the answers to the question of whether they found a relationship between physical exercise and moral development, a categorization of qualitative analysis categories was necessary to group the groups of answers.

In one particular response, the emotional issue was addressed; however, presented from the well-being and the change experienced by the interviewee through physical training, since he offered a condition of obesity which improved substantially from the discipline of his workouts, although there is a sense of well-being associated with sport even in this person we cannot speak of Kantian moral development but of the will he had with a specific purpose that was to achieve a healthy weight.

In some answers, the concept of self-regulation is glimpsed in the sense of discipline in sports practice; however, it cannot be considered that in this population group, we can speak of a consolidated moral development since it must be regarded as the age chosen to develop the project is between 13 and 15 years old, when due to cognitive immaturity the cerebral amygdala of the limbic system is not yet consolidated and therefore the regulation of emotions and motivations is not fully developed.

las emociones han representado un tema interesante para el análisis, en primer lugar debido a que controlan conductas complejas en el humano como la motivación y el aprendizaje (...)

Éstas son la amígdala y la corteza orbito-frontal. El sistema límbico junto con las estructuras de la corteza frontal, procesan los estímulos emocionales y los integran a funciones cerebrales complejas, las cuales incluyen: decisiones racionales, expresión e

interpretación de conductas sociales e incluso la generación de juicios morales, entendiéndose estos últimos como los actos mentales que afirman o niegan el valor moral frente a una situación o comportamiento <sup>2</sup> (Kandel, 2000, p. 61).

[Emotions have represented an interesting topic for analysis, firstly because they control complex human behaviors such as motivation and learning (...)]

These are the amygdala and the orbitofrontal cortex. The limbic system, together with the structures of the frontal cortex, processes emotional stimuli and integrates them into complex brain functions, which include rational decisions, expression and interpretation of social behaviors, and even the generation of moral judgments, the latter being understood as the mental acts that affirm or deny the moral value in the face of a situation or behavior] (Kandel, 2000, p. 61).

As for the interviews of people who do NOT exercise, it was evidenced that they know it is good, even knowing that physical training represents some kind of well-being. They refer that in the process of apprehension of integral well-being, they require the external figure of someone to accompany them or help them plan their free time because they still do not show signs of having consolidated a scenario of autonomy, which is the first step in the process of developing their own wellbeing.

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<sup>2</sup> *Vista de El Sistema límbico y las emociones: empatía en humanos y primates.* (s/f). Ibero.mx. Recuperado el 8 de mayo de 2024, de <https://psicologiaiberoamericana.ibero.mx/index.php/psicologia/article/view/270/523>

The human being by himself cannot consolidate a moral structure. Therefore, he needs an education that promotes, develops, and consolidates his morality. Educational institutions should not only be constituted as disseminators of knowledge and cultural practices, but they should also be spaces where this process of understanding the relationship between his internal morality and the set of social norms that allow him to insert himself effectively with high moral standards is accompanied.

El hombre está destinado, por su razón, a estar en una sociedad con hombres y en ella, y por medio de las artes y las ciencias, a cultivarse, a civilizarse y a moralizarse, por grande que pueda ser su propensión animal a abandonarse pasivamente a los incentivos de la comodidad y de la buena vida que él llama felicidad, y en hacerse activamente, en lucha con los obstáculos que le depara lo rudo de su naturaleza, digno de la humanidad. El hombre tiene, pues, que ser educado para el bien (p. 224-225)<sup>3</sup>

[Man is destined, by his reason, to be in a society with men and it, and utilizing the arts and sciences, to cultivate, civilize and moralize himself, however great his animal propensity may be to abandon himself passively to the incentives of comfort and the good life that he calls happiness, and to make himself actively, in struggle with the obstacles

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<sup>3</sup> K ANT, *Antropología en sentido pragmático*, Barcelona, Rev. Occidente, 1935, pp. 224-225.

that the roughness of his nature may throw at him, worthy of humanity. Man must, therefore, be educated for the good] (p. 224-225).

The terms moral development and self-regulation were not part of the discourse of the interviewees, nor did they associate it with other premises of social behavior, so at the time of conducting the surveys, the students needed to recognize the term and its applicability in their sports practice, so it was necessary to explain in greater detail the implication of this term in the research. Once the definition and its implications with physical exercise were clarified, 63.6% of the respondents affirmed that there is a direct relationship between self-regulation as a form of personal discipline and the planning and execution of a sports practice. The research started from a hypothesis that assumed that sport was in itself a generator of well-being due to the secretion of well-being hormones; however, in the results of the interviews with people who do engage in physical exercise, it became evident that sport does not necessarily operate as a mechanism to improve mood; for example, aspects were found that when the results of the planned training are not met, it can trigger anxiety and frustration.

As researchers, there was an initial bias in thinking that the chosen population group developed a physical activity motivated more by an aesthetic issue than by the internalization of exercise as a way of cultivating integral health, and this initial position as researchers was proven since responses were found that support this position. The fact of taking pictures to see body changes over time or seeking to condition the body to respond to aesthetic demands, and losing sight of the possibilities in improving moods, being able to have a more restful sleep, or even being able to process emotions in a better way, vindicate that vanity is a very powerful motivation far removed from any moral approach.

“Entendemos por culto al cuerpo la obsesión por el estado del propio físico que nos conduce a llevar una vida centrada en los ritos para mantener, o conseguir tener, un determinado aspecto”(iborjabioetica, 2008, p. 1).

### **Conclusions**

Through the methodology, the instruments and the collection of information, it is concluded that the relationship between moral development from a Kantian perspective and the practice of sports in adolescents between 13 and 15 years old from the LSTM does not correspond to a moral imperative but to a search for identity, recognition and achievement of physical changes. It was very complex to obtain these results because the premise of the research is of a philosophical order, so an initial explanation of the subject was necessary.

Regarding the students' perception of physical training, it was possible to infer from the interviews that there are students for whom exercise does not arouse any interest, while there are others who regularly practice some sport and relate morale to discipline. Moreover, in this group of students, heteronomy rather than autonomy can be observed, since they need external

motivations to consolidate their sports practice.

It is impossible to speak of moral development in the group chosen as a research sample. The results do not show levels of autonomy or internal regulation that mobilize physical training as a good in itself but as an end. From the results, it is inferred that comprehensive health as a convergence between physical, emotional, and mental well-being is not conceived as a moral reason for establishing a physical training practice. This can be explained by cultural practices, the media, social networks, and group pressure, which surpass the search for personal potential in moral terms.

There is also a social context that does not favor conditions of moral development in adolescents. Doing the right thing, respecting the rules, or acting according to what should be done comes into conflict with immediacy or taking advantage of situations for personal benefit. A society that lacks social justice, equality, or public sanction for those who break the rules or participate in illegal activities cannot favor categorical moral imperatives. Therefore, the border between doing the right thing or succumbing to crime is blurred. Even illegal practices are legitimized or naturalized.

For this reason, education is an excellent opportunity for a significant change in society. Moral pedagogy must mainstream the entire educational process and not only be approached from humanistic areas; It must be a discourse that accompanies and allows for the consolidation of moral development throughout the student's educational process. In addition, the family has a great responsibility in the educational process because if moral development is promoted as an imperative that must be consolidated to form better people and citizens, parents are the ones

who, with their speeches and examples, legitimize this search for categorical imperatives in their children.

(...) existe una cultura de la habilidad y una cultura de la disciplina. A través de la primera se desarrollan destrezas para la consecución de fines en general. Por medio de la segunda se libera a la voluntad de la determinación de los apetitos.(...) Tanto la cultura de la habilidad como la disciplina se enseñan desde el hogar y la escuela. Son diversos los talentos que sirven a la cultura y se desarrollan a través de la educación, ciencia y arte. Para que estos se expresen plenamente, son necesarias condiciones apropiadas en el marco de una sociedad civil que garantice cierto orden social de paz, justicia y equidad.” Bajo el influjo de tal orden social el hombre construye una cultura perfeccionada que refina su propia naturaleza.” (Ocampo. R, 2011, p. 78).

[(...) there is a culture of skill and discipline. Through the former, skills are developed to attain ends in general. Through the latter, the will is freed from the determination of the appetites. (...) Both the culture of ability and discipline are taught at home and school. Diverse talents serve culture and are developed through education, science, and art. For these to express themselves fully, appropriate conditions are necessary within the framework of a civil society that guarantees a certain social order of peace, justice, and equity.” Under the influence of such a social order, man builds a perfected culture that refines his nature.”] (Ocampo. R, 2011, p. 78).

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1. [entrevistas- ANEXO](#)
2. [Encuesta a grado 8,9,10 \(Respuestas\)](#)