

## Article

# The Moderating Effect of Sex and Age on the Pattern of Body Image by Pre-Adolescents and Adolescents and Its Relationship with the Time They Spend Doing Sports

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**Abstract:** The cult of the body has become a universal phenomenon, and many adolescents feel frustrated and disappointed with their own bodies for not matching the prevailing beauty standards. An empirical-quantitative cross-sectional investigation was carried out to understand perspectives of body image among Spanish youngsters of both sexes in three evolutionary substages (pre-adolescence, early adolescence, and middle adolescence) in the four factors that make up the *Multidimensional Body Self Relations Questionnaire* adapted to Spanish pre-adolescents and adolescents (MBSRQ-S<sub>A-a</sub>) and their relationship with the time that they spend partaking in extracurricular sports. The results show that both boys and girls do not consider physical activity as an instrument to improve health. On the other hand, girls differ from boys regarding a more unstable and convulsive pattern of body image, characterized by a disconnect between physical activity and satisfaction with body image, where weight loss diets could acquire greater relevance. This research demonstrates two things: first, that the MBSRQ-S<sub>A-a</sub> is a valid instrument to assess the body image pattern of adolescents, and second, that it opens the possibility of being able to identify adolescents who are at risk (physical, psychological, social); therefore, it is also capable of helping to prevent dramatic results and protecting the Sustainable Personal Development of adolescents.

**Keywords:** MBSRQ-S<sub>A-a</sub>; pattern of body image; physical activity; pre-adolescence and adolescence; sustainable personal development



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## 1. Introduction

We are witnessing a social moment in which the valuation of people according to their external attributes, such as their physical appearance, is increasingly relevant. We value and judge others based on the image they convey to us, and this assessment is mediated by the value system we acquire through socialization groups such as family, friends, the media, or social networks. In turn, we use those same measurement patterns to judge ourselves and seek acceptance, recognition, and the positive assessment of our reference groups [1,2]. With all this, we configure a large part of our self-concept and self-esteem [3].

Thus, the value society places on body image today has a very significant impact on the construction of our personal and social identity [1]; thus, body image plays a role in determining our conduct [1–4]. As a result, the physical aspects of ourselves that we show to others has become a subject concern for all of us [1,2].

Body image is a multidimensional construct that refers to the perception we have of our body as a whole, its parts, and its movement. It refers to the subjective experience

(thoughts and emotions) to which those perceptions lead us and to the behavior and attitudes derived from the cognitions and feelings that we experience [1–4]. Specifically, body image is made up of four main components: (a) perceptive, which relates to the degree of satisfaction that the person experiences concerning their body; (b) affective, which is based on feelings derived from bodily satisfaction; (c) cognitive, which is linked to thoughts and beliefs about physical aspects; and (d) behavioral, which encapsulates behaviors around the perception of one's own body and its exposure to others [1,2]. The point is that these four components are greatly influenced by the image of the ideal body that prevails in society and by the prestige given to it. In general, we all have our social models of reference, which are, nowadays, closely linked to the content displayed on social networks [3–5].

Interest in body image begins at a very early age [6] and, from an early age, it can significantly affect children's self-esteem [7]. In childhood, social influence mainly comes from one's close family environment, which can be worrying when the family is excessively concerned with health and aligns themselves with the canons of beauty associated with thinness [5,7]. Similarly, it is worrying when the family environment is not concerned at all about health as this could lead them to overfeed their children, potentially resulting in obesity [7]. Another important source of influence in childhood is movies and children's games, many of which are loaded with characters with bodies attuned to social stereotypes of beauty—all models that children unconsciously internalize [1,3,6]. Generally, young boys want to imagine themselves as the strongest and most muscular characters, while girls want to imagine themselves as the most slender and beautiful princess. This is a fact. So, however much you want to instill in them that "beauty is inside" (in line with the famous song from a certain Disney children's film), the stereotypes of beauty they try to emulate are the ones they will internalize.

However, adolescence is the stage that has the greatest influence on shaping body image and generates the greatest amount of concern [8–11]. This is an evolutionary period in which young people undergo significant physical, mental, and social changes. On a physical level, the changes that come with puberty are the most visible and they can influence the adolescent's adaptation process. These changes are characterized by rapid and visible physical modifications with respect to body shape, size, and composition and lead to the maturation of one's reproductive capacity (albeit with a disparate growth pattern depending on sex) [5,7]. This is known as sexual dimorphism [12]. On a mental level, adolescents feel strange and different from others, which is why they are very susceptible to the comments and opinions of their peers and adults regarding their physique [8,9]. On a social level, adolescents abandon the family as a reference group and focus their relationships on groups of friends and peers. Their self-concept and self-esteem are conditioned by the perceptions and assessments of them by their reference groups, and given the excessive need to please them, they perform complacent behaviors. This means that adolescents adopt behaviors that conform to what is socially well-considered by their peer group, rejecting everything that could generate a negative assessment of the image they show and project [10,11]. At this stage, both girls and boys use these body image values as a reference to judge themselves and others [3,13–15], perpetuating the cult of the body, i.e., the idea of the type of body that is instilled in them through social networks and the media. Abundant research has shown that the female beauty canon is defined by thinness, slenderness, and having a toned body, while the male beauty canon is characterized by exhibiting physical strength and the development of the musculature [15–17].

To achieve the perceived perfect body, it is common for adolescents to compare their own body with the ideal body prototype. However, this ideal of body image is not always realistic, on the one hand, because it has been widely demonstrated that a large majority of the images we see on social media and in the media generally are manipulated to project a specific appearance [3,15,16], and on the other hand, by its filter of perception and subjectivity [1,3,4]. The discrepancy between what is real, what is perceived, and what is desired frequently generates dissatisfaction regarding body image among adolescents,

profoundly affecting their self-esteem [1,13,15]. In an attempt to achieve the ideal body, they adopt all kinds of behaviors [12,15–17] that can often profoundly affect their physical health (e.g., the development of eating disorders such as anorexia, bulimia, etc. [6,9,10,12]) as well as their mental health (e.g., psychological disorders such as depression, anxiety, etc. [6,8,14]).

One of the healthiest behaviors one can adopt to come closer to achieving the ideal body is to exercise. Physical activity and sports are decisive factors in constructing and maintaining body image and mediate the relationship between body image and self-esteem [13]. Physical self-concept is considered a good predictor of psychological adjustment and quality of life, meaning that physical activity significantly contributes to the formation of one's self-concept [12]. Many studies have concluded that the greater the amount of physical activity one partakes in, the greater the satisfaction with one's body image is [3,12,17]. However, the relationship between physical activity and body image is complex since, on the one hand, the practice of physical activity produces changes in physical appearance that lead to a more positive body image. On the other hand, one's own body image can demotivate or discourage people from partaking in sports or physical activity, potentially leading to the development of eating disorders due to excessive concerns about body weight [12,17].

Body image pattern could be referred to as the representation of the relationship between the components that make up the construct and the relationship they maintain with other influence variables. Thus, since our senses of body image are affected by external influences, since external influence comes from different sources in different stages of life, and since adolescence is a critical period in forming personal and social identity, there is an important and urgent need to deepen the knowledge of body image pattern among adolescents and the relationship that their components have with variables of influence. This research contributes to fulfilling this need. Perhaps the instrument that has the best psychometric characteristics (in terms of reliability of measurement and evidence of validity) to evaluate body image from a multidimensional approach is the *Multidimensional Body Self Relations Questionnaire* (MBSRQ) developed by Brown et al. [18,19]. Unsurprisingly, it has been translated into numerous languages and validated in multi-countries samples, demonstrating high reliability and strong construct validity for both sexes, both in the normal population [20] and in clinical or quasi-clinical groups [21]. Botella et al. [22] adapted and validated the MBSRQ (MBSRQ<sup>®</sup>) in Spain. Recently, Fernández et al. [23] adapted (and subsequently validated) the MBSRQ<sup>®</sup> so that it could be more suitable for the population of young Spaniards. This adapted questionnaire is referred to as MBSRQ-S<sub>A-a</sub>, and it has demonstrated factorial invariance depending on sex and the aforementioned three age groups consisting of preteens, early adolescents, and middle adolescents [24] (aged 9–11 years, 12–13 years, and 14–16 years, respectively) in the four factors that comprise the questionnaire: *Satisfaction with physical appearance*, *Concern about appearance*, *Concern about illness*, and *Concern about physical shape/Satisfaction with physical shape*. This last aspect is of vital importance because it means that, through analyzing the responses to this questionnaire, reliable evaluations and comparisons can be made between young people of both sexes in the three substages of adolescence. As of now, the MBSRQ-S<sub>A-a</sub> is the only adaptation of the MBSRQ questionnaire for young people with these psychometric characteristics.

Since it has been widely demonstrated that young people are more vulnerable than adults to disorders derived from their perception of body image and any of the nuances that it encompasses [25–27] and that these disorders can dramatically affect their lives, it is as necessary as it is urgent to gain insight regarding the pattern of body image that Spanish youngsters of both sexes have in the three evolutionary substages (pre-adolescence, early adolescence, and middle adolescence) from the perspective of the four factors that make up the MBSRQ-S<sub>A-a</sub>. To date, this aspect has not been addressed, and it constitutes the main aim of this research study. In this study, we also report the relationship between the

four factors that make up the MBSRQ- $S_{A-a}$  with the hours that young people dedicate to practicing sports outside of school.

To achieve these objectives, informed by the data collected in our research, the following sections of this paper are as follows: First, the descriptive statistics of the four factors that measure the construct in young people are examined, and the distribution of the measure of each of them is examined too. Next, we describe the extent to which the four factors are related to each other and to what extent each is related to the time young people spend partaking in extracurricular sports. Secondly, this paper also examines whether there are relevant differences based on sex, considering the four dimensions of the MBSRQ- $S_{A-a}$ , and whether these differences are stable or moderated by the age that defines the developmental stage they are at. Finally, the strength of the four dimensions of the MBSRQ- $S_{A-a}$  in differentiating between young people of specific sexes and ages is evaluated.

## 2. Materials and Methods

### 2.1. Participants

The sample size for our research comprised 719 students between the ages of 9 and 16 from different geographical and socioeconomic backgrounds and from 18 educational centers of the Principality of Asturias. They are the same participants whose answers to the MBSRQ<sup>®</sup> [22] were adapted and validated for young Spanish pre-adolescents and adolescents [23]. The 719 participants constitute approximately 1/2 of the total sample size that voluntarily decided to participate in a complex investigation focusing on body image, which aimed to delve into the roles that body image and sporting activity play in different emotional, aptitude, behavioral, social, and academic performance aspects of young people.

### 2.2. Procedure

Because the orography of the Principality of Asturias is rugged (in the most mountainous areas, the population density is small, and in the less mountainous and more open areas, the population is higher) and the educational centers are unevenly distributed from east to west, we considered it necessary to take into account the location, the population density where the centers (schools and institutes) are located, and the conditions of finance for these centers (public, private and subsidized). Accordingly, 25 centers (schools and institutes) situated in 10 councils of the Principality of Asturias were selected, which, as a whole, were balanced based on their condition of being public, private, and subsidized centers, and the appropriate steps were taken in the process of requesting their participation. Eventually, 18 centers (5 public, 5 private, and 8 subsidized) decided to participate, and the informed consent of the young people's parents (or legal representatives) was obtained for all participants. We believe that there is no reason to think that the population of young people in the Principality of Asturias differs from the population of young people in the rest of Spain for the following reasons: Even though the sample size is fairly small, we believe that the process followed for its selection guarantees that the sample of young people in the Principality of Asturias is representative of the population of Spanish young people under *normal conditions*. In other words, we believe that the characteristics of the young people that comprised our studied sample represent the characteristics of the profile of pre-adolescent and adolescent young people (in the early and middle stages) and that studied sample provides insights relating to the range of problems and particular conditions that *daily life* presents for the families in Spain. Therefore, we believe that the sample of young people from the Principality of Asturias, as a whole, is not biased by problematic circumstances of a personal (emotional or behavioral issues, i.e., it is not a clinical sample), social, or family (it is not a clinical sample, and young people of all classes are represented social) nature. Some participants may have presented particular problematic circumstances beyond our knowledge. Therefore, the results reported in this study should act as a reference for the pattern of body image among young people in *normal conditions* found in

*everyday life* and serve to compare the pattern of body image among young people living in Spain in conditions that deviate from these parameters and to identify young people living in the conditions considered in this study. The application of the questionnaires and the collection of the information were carried out by applying the ethical standards required by the University of Oviedo. Two people were adequately trained to perform this task to maximize control in data collection.

After obtaining informed consent from both the centers (address and parents' association) and the parents (or legal representative) of the young people, questionnaires were issued and semi-structured interviews were conducted. In addition, the following precautions were taken: To prevent young people in different classrooms and courses from the same school from sharing information (which could cause experimental reactivity), the application of the research methods (questionnaires and the semi-structured interviews) was carried out at the same time in all participating classrooms [28].

Emphasis was placed on answering the questionnaires and interview questions honestly and objectively since the responses were utterly anonymous. Participants were told that they had 45 min to answer without haste and were encouraged to ask aloud about comprehension difficulties. These precautions prevented data loss [29,30]. The entire research process was carried out normally. Difficulties appeared only occasionally (never the same ones, and with similar frequency in all the courses) and were always solved. Further details of the planned design, both for the selection of the sample and for the data collection, can be found in a study by Fernández et al. [23].

### 2.3. Instruments

*Semi-structured interview.* With this research method, information pertaining to sociodemographic data (age, grade, sex) and the number of hours per week that they dedicated to sports activities outside school hours was collected. Participants also answered ten clear and distinct questions regarding their motivation to achieve academic and personal goals; however, these goals are not the subject of this research.

The *Multidimensional Body Self Relations Questionnaire* adapted to the population of Spanish pre-adolescents and adolescents (MBSRQ-S<sub>A-a</sub>) [23] evaluates the construct of body image among Spanish young people between the ages of 9–16 in three fundamental domains (physical appearance, physical condition, and health/illness) and also examines satisfaction levels regarding specific body parts and self-assessment and concern about being overweight. It consists of 20 items on a 5-point scale from 1 to 5 (strongly disagree-strongly agree), sized into 4 differentially correlated factors: *Satisfaction with physical appearance* (F1), *Concern about appearance* (F2), *Concern about illness* (F3), and *Concern about physical shape/Satisfaction with physical shape* (F4)—made up of 6, 4, 3, and 7 items, respectively. The MBSRQ-S<sub>A-a</sub> has been proven to have satisfactory levels of reliability (Cronbach's Alpha: 0.810, 0.730, 0.626, 0.713, and 0.798 in F1-F4, and the whole scale, respectively). See McDonald's Omega ordinal and Composite Reliability in Fernández et al. [23] for adequate evidence of concurrent validity and a demonstration of factorial invariance as a function of sex and the three aforementioned age groups (9–11, 12–13, and 14–16 years old). The measurements of the four factors were interpreted as follows: the higher the score, the more positive the evaluation of *your* body image in terms of the semantic content that each of the four factors comprises. Finally, it should be noted that there are five inverse items on the scale. However, Fernández et al. [23] advise positively presenting them because, in general, the participants stated that, in this way, the content of these five items could be better understood.

The participants in this research also provided answers to other questionnaires. However, no reference is made to these because they are not the subject of analysis in this research.

#### 2.4. Design

An empirical-quantitative cross-sectional investigation was carried out to create the present descriptive and causal-comparative study [31], which includes a detailed data analysis section and presents our results.

#### 2.5. Data Analysis

Data analysis was performed in two phases: In the first, a descriptive and correlational study was carried out, where the distribution of the empirical measure in the four factors of the MBSRQ-S<sub>A-a</sub> was examined in the six conditions resulting from combining the variables sex and developmental stage ( $2 \times 3$ ), the relationship that the four factors maintain with each other, and the relationship that they carry with the time they dedicate to sports outside school hours. It also examined whether the proportion of young people who partake in physical activity is the same depending on sex, their personal developmental stage, and whether the hours they spend partaking in physical activity outside school hours are significantly different depending on both variables. In the second phase, an inferential study was carried out to assess whether there are relevant differences between both sexes in the set of four factors of the MBSRQ-S<sub>A-a</sub> and to assess to what extent these differences (if they exist) are moderated by the ages that define the three substages of adolescence studied. Next, we thoroughly examined which factors of the MBSRQ-S<sub>A-a</sub> are the most determinant in differentiating between the six experimental conditions and to what extent they define the nuances that make the six subgroups of young people the same or different.

*Analysis carried out in the first phase:* Using the Kolmorow–Smirnov (KS) statistic and examining the bias and kurtosis, a study was carried out on the distribution of the empirical measure of the four factors of the MBSRQ-S<sub>A-a</sub> and the *time* they dedicate to physical activity outside school hours. It was verified that the distribution was not normal (KS = 0.105, 0.081, 0.090, 0.084, and 0.122 in F1–F4 and *time*, respectively, and always  $p < 0.001$ ). However, since the values of bias and kurtosis were always less than 1, it was decided that the parametric tests could be used without compromising the validity of the statistical conclusion [32]. The independent relationship between two scale variables was measured using Pearson's correlation ( $r$ ). The independence relationship between two categorical variables was determined by using Cramer's V. The examination of the differences between youngsters in the time they dedicate to physical activity outside school hours was carried out using ANOVA ( $2 \times 3$ ) and the comparisons of means using the Games–Howell test since the variances were heterogeneous (the result of Levene's test).

*Analysis carried out in the second phase:* The pattern of correlations between the empirical scores of the four factors of the MBSRQ-S<sub>A-a</sub> observed in the previous stage (the correlations are mostly statistically significant, and less than 0.80) justified the use of MANOVA [33,34]. Thus, a two-way (Sex  $\times$  Developmental stage:  $2 \times 3$ ) multivariate factorial analysis was performed. Although only the F1 factor showed heterogeneous variances ( $F_{\text{Levene}} = 2.687$ ;  $gI_1$  and  $gI_2 = 5$  and  $713$ ;  $p = 0.020$ ), the variance–covariance matrix was heterogeneous (M of Box =  $89.57$ ;  $p < 0.001$ ); therefore, for this reason, the decision was made to examine the result using Wilks' lambda statistic (see [35]) and to use the resampling technique for parameter estimation [36]. The analysis was completed by performing a stepwise discriminant analysis [37,38] to examine which combination of dependent variables has more influence on the differentiation between the groups defined by the crossing of variables (Sex and Developmental stage), paying special attention to the standardized coefficients and the magnitude and sign of the centroids. This analysis was first performed on a training sample (approx. 50%;  $n = 362$ ), and the result was verified on the verification sample. The results of both analyses, MANOVA and Discriminant Analysis, are displayed numerically and graphically.

The level of significance was  $\alpha = 0.05$ , and the reference values were as follows:  $r \geq 0.20$ , 0.50, and 0.80 for small, moderate, and strong correlation, respectively [39] (we considered it opportune to describe that there is a null relationship when  $r < 0.10$  and irrelevant correlation when  $0.10 < r < 0.20$ ). Eta squared ( $\eta^2$ ), 0.01, 0.06, and 0.14, small,

medium and large, respectively [40]. Data analysis was performed using the IBM SPSS 27 statistical program.

### 3. Results

#### 3.1. Sociodemographic Profile of the Sample

Among all participants, 54.9% were boys ( $n = 395$ ), and 45.1% were girls ( $n = 324$ ). A total of 30.9% ( $n = 222$ ) were preteens (9–11 years; age range 1 (AR1)), 31% ( $n = 223$ ) were in early adolescence (12–13 years; AR2), and 38.1% ( $n = 274$ ) were in middle adolescence (14–16 years, AR3), respectively. The proportion of both sexes is statistically equivalent, as is the ratio of the three age ranges in each sex.

#### 3.2. Description of the Sample Profile in Body Image in the Four Factors That Define the Construct Contained in the MBSRQ-S<sub>A-a</sub> and Description of the Sports Activity Carried Out by Young People outside of School

The results are shown numerically in Table 1 and graphically in Figure 1.

**Table 1.** Descriptive statistics [M(SD)] of each of the factors of the of MBSRQ-S<sub>A-a</sub> based on the aforementioned variables (Sex and Age).

Age (n)	Boys (n = 395)				Girls (n = 324)				
	F1	F2	F3	F4	Age (n)	F1	F2	F3	F4
9–11 (n = 129)	3.83 (0.70)	3.28 (0.81)	3.64 (0.86)	4.04 (0.58)	9–11 (n = 93)	4.01 (0.66)	3.65 (0.82)	3.71 (0.82)	3.86 (0.59)
12–13 (n = 116)	3.83 (0.65)	3.43 (0.97)	3.33 (0.96)	4.09 (0.60)	12–13 (n = 107)	3.61 (0.76)	3.79 (0.77)	3.42 (0.82)	3.62 (0.64)
14–16 (n = 150)	3.65 (0.61)	3.33 (0.78)	3.23 (0.82)	3.91 (0.58)	14–16 (n = 124)	3.28 (0.80)	4.05 (0.76)	3.16 (0.83)	3.42 (0.65)

Note: Age = Age range;  $n$  = sample size in the corresponding subgroup; M(DT) = Mean (Standard Deviation); F1, F2, F3, and F4 = MBSRQ-S<sub>A-a</sub> factors (F1 = Satisfaction with appearance, F2 = Concern about appearance, F3 = Concern about illness, and F4 = Concern about physical shape/Satisfaction with physical shape).

It is noteworthy that, in all the conditions defined by the crossing of the levels of the variables (Sex  $\times$  Age), the means (M) of the four factors are higher than the possible theoretical mean value (because the Likert scale has a range between 1 and 5, this would be 3), and the variability (SD) is less than 1.

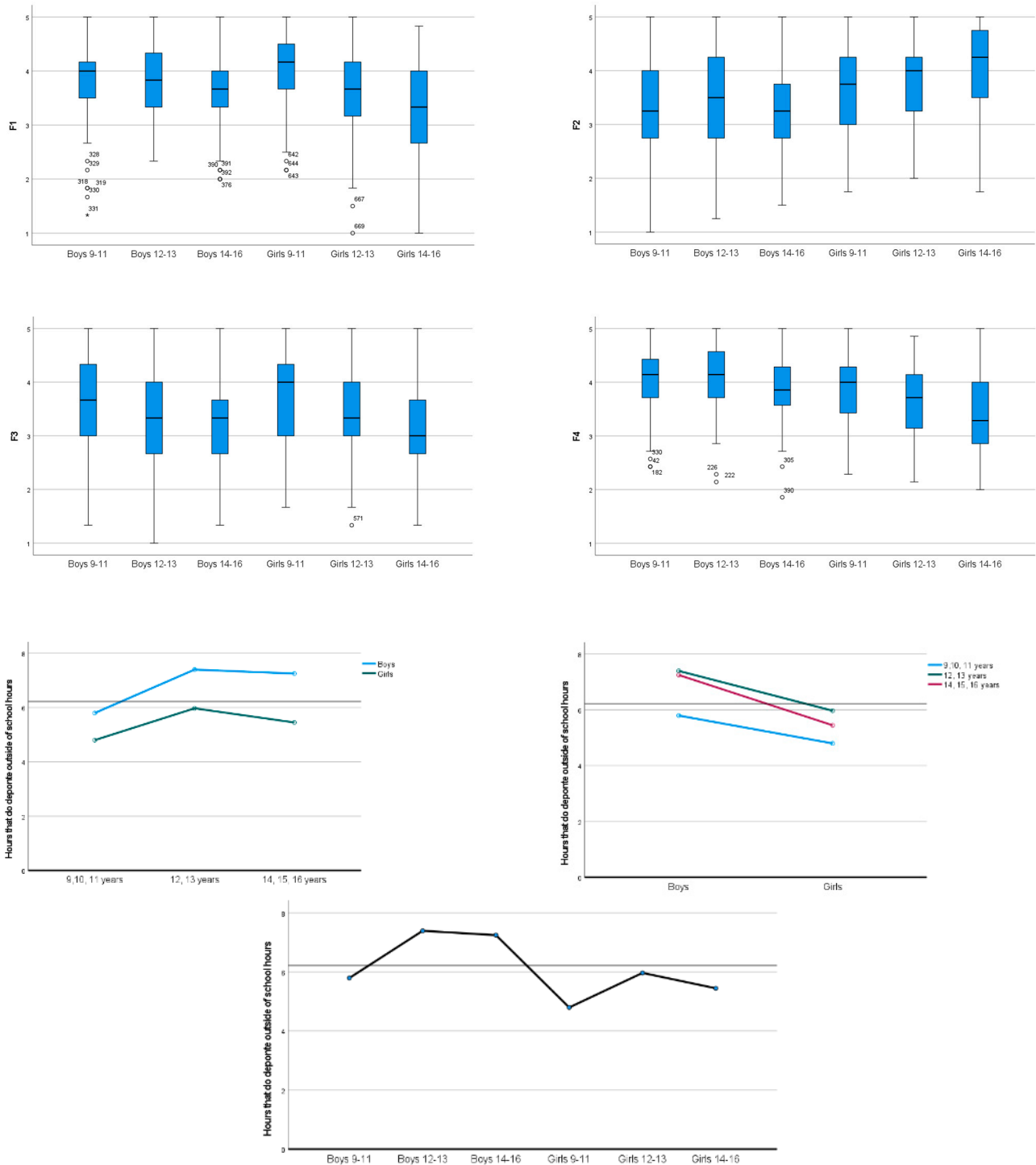
It is shown that, in F2 (*Concern about appearance*), girls have a higher mean than boys in all age ranges, and in F4 (*Concern about physical shape/Satisfaction with the physical shape*), boys have a higher mean than girls in all age ranges. In both variables, the response pattern in the three age ranges is very similar in boys but not in girls. In girls, in F2, the mean increases as age increases, and in F4, the mean decreases as age increases.

The response pattern of the empirical measurement of factor F3 (*Concern about illness*) is the same in both sexes.

Regarding the F1 factor (*Satisfaction with physical appearance*), boys and girls at the highest age level (14–16 years, AR3) have the lowest average value; however, the response pattern is very different. Girls experience a progressive decrease as age increases, while boys remain stable until 12–13 years of age, experiencing lower scores after that.

Empirical measures in F1 and F4 identify outliers at lower distribution levels. In F1, they occur in both sexes at the age of 9–11, in boys at 14–16, and in girls at 12–13. In F4, they only occur in boys and all three age ranges. On the other hand, it is noteworthy that some participants show very high values in the four factors. However, these values are the norm and not the exception; therefore, there are no outliers at that end of the distribution.

In total, 88.7% ( $n = 638$ ) of young people partake in physical activity outside school hours—more boys (56.1%;  $n = 358$ ) than girls (43.9%;  $n = 280$ ). Boys partake in physical activity to a greater extent with age—30.7% ( $n = 196$ ), 32.1% ( $n = 205$ ) and 37.1% ( $n = 237$ ), in AR1, AR2, and AR3, respectively. However, the difference is not statistically significant, neither between both sexes ( $\phi = 0.066$ ;  $p = 0.075$ ) nor between the three age ranges (Cramer = 0.072;  $p = 0.158$ ).



**Figure 1.** (Top) representation of the distribution of the empirical measure of the 4 factors in each of the groups (Sex × Age). In F1, F3, and F4, atypical scores are observed (the number only indicates the identification number of the specific case). \* indicates an outlier value, and a circle indicates an extreme value). (Bottom) representation of the hours that young people dedicate to physical activity per week outside of school hours (young people who stated that they do not exercise outside school hours have been eliminated). The horizontal line in the graphs represents the average number of hours dedicated to physical activity ( $M = 6.22$ ;  $SD = 3.15$ ).

Among those young people partake in physical activity outside school hours, there are statistically significant differences in the time they dedicate to this activity between boys ( $M = 6.84$ ;  $SD = 2.81$ ) and girls ( $M = 5.43$ ;  $SD = 3.31$ ) [ $F = 33.86$ ;  $df = 1$  and  $632$ ;  $p < 0.001$ ;



$\eta^2 = 0.051$ ] and also between age ranges [ $F = 11.28$ ;  $df = 2$  and  $632$ ;  $p < 0.001$ ;  $\eta^2 = 0.034$ ]. Concerning AR1, AR2, and AR3, the values were as follows: AR1:  $M = 5.37$ ;  $SD = 2.42$ ; AR2:  $M = 6.75$ ;  $SD = 3.27$ ; AR3:  $M = 6.46$ ;  $SD = 3.42$ . The interaction is not statistically significant.

3.3. Correlation between the Four Factors That Help Form the Construct of Body Image in Young People from the Perspective of the MBSRQ-S<sub>A-a</sub> and Correlation with the Hours They Dedicate to Sporting Activity

Results are shown in Table 2.

**Table 2.** Correlation between the empirical measures of the factors of MBSRQ-S<sub>A-a</sub> and correlation with the time spent partaking in sporting activity per week. Values are shown for both girls and boys. Panel A: correlation in the whole sample. Panel B: according to age ranges.

Panel A. Correlation between the Factors of MBSRQ-S <sub>A-a</sub> in the Set of the Whole Sample											
Girls ( $n = 324$ ; 45.1%)					Boys ( $n = 395$ ; 54.9%)						
	F1	F2	F3	F4	HW		F1	F2	F3	F4	HW
F1	1	0.125 *	0.320 **	0.398 **	0.047	F1	1	0.285 **	0.180 **	<b>0.403 **</b>	0.247 **
F2		1	0.155 **	-0.018	-0.162 **	F2		1	0.245 **	0.278 **	0.100 *
F3			1	0.246 **	-0.008	F3			1	0.222 **	0.034
F4				1	<b>0.431 **</b>	F4				1	0.383 **
HW					1	HW					1
Panel B. Correlation between the MBSRQ-S <sub>A-a</sub> factors according to age ranges											
9–11 years old ( $n = 222$ ; 30.9%)											
Girls ( $n = 93$ ; 28.7%)					Boys ( $n = 129$ ; 32.7%)						
	F1	F2	F3	F4	NG <sup>1</sup> HW		F1	F2	F3	F4	NB <sup>1</sup> HW
F1	1	<b>0.512 **</b>	0.201	<b>0.411 **</b>	-0.156	F1	1	0.328 **	0.152	0.363 **	0.277 **
F2		1	0.361 **	0.193	-0.270 **	F2		1	0.394 **	0.269 **	0.120
F3			1	0.266 **	-0.103	F3			1	0.212 *	0.009
F4				1	0.191	F4				1	0.217 *
HW					1	HW					1
12–13 years old ( $n = 223$ ; 31%)											
Girls ( $n = 107$ ; 33%)					Boys ( $n = 116$ ; 29.4%)						
	F1	F2	F3	F4	NG <sup>2</sup> HW		F1	F2	F3	F4	NB <sup>2</sup> HW
F1	1	0.213 *	0.286 **	<b>0.454 **</b>	0.221 *	F1	1	0.330 **	0.181	0.385 **	0.275 **
F2		1	0.225 *	0.109	-0.030	F2		1	0.182	0.355 **	0.140
F3			1	0.143	0.024	F3			1	0.228 *	0.063
F4				1	<b>0.483 **</b>	F4				1	<b>0.404 **</b>
HW					1	HW					1
14–13 years old ( $n = 274$ ; 38.1%)											
Girls ( $n = 124$ ; 38%)					Boys ( $n = 150$ ; 38.3)						
	F1	F2	F3	F4	NG <sup>3</sup> HW		F1	F2	F3	F4	NB <sup>3</sup> HW
F1	1	0.039	0.247 **	0.192 *	0.020	F1	1	0.204 *	0.166 *	<b>0.429 **</b>	0.256 **
F2		1	0.108	-0.131	-0.231 **	F2		1	0.219 **	0.211 **	0.021
F3			1	0.172	0.024	F3			1	0.206 *	0.150
F4				1	<b>0.563 **</b>	F4				1	<b>0.525 **</b>
HW					1	HW					1

Note: HW = number of hours they dedicate to sporting activity outside school hours; NG<sup>1</sup>-NG<sup>3</sup> = girls who do not partake in sports outside of school (9, 14, and 21 in girls, respectively, in each age range); NB<sup>1</sup>-NB<sup>3</sup> = boys who do not partake in sports outside of school (17, 4, and 16, in each age range, respectively); \*\* =  $p$  value < 0.001; \* =  $p$  value < 0.05. Correlations greater than 0.40 are highlighted in bold. For the rest, see Table 1.

The above-listed results were obtained as follows: First, the convergences in the pattern of correlations between boys and girls in the total sample were described. Then we described whether this pattern is stable or not in the three age groups of young people.

Next, we proceeded in the same way, examining the divergences. These descriptions were made for each pair of correlations. There are five convergences and five divergences:

*Convergences in the pattern of correlations between boys and girls.*

1. In the total sample of girls and boys, Satisfaction with appearance (F1) shows a moderate-to-low correlation with Concern about physical shape/Satisfaction with physical shape (F4). However, in boys, the correlation magnitude remains stable as age increases, but in girls, the correlation remains moderate-to-high in AR1 and AR2 (pre-adolescents, and early adolescents, respectively) and is irrelevant in AR3 (middle adolescents).
2. In the total sample of girls and boys, Concern about appearance (F2) shows an irrelevant correlation with the number of hours they dedicate to sporting activity outside school hours (HW) (negative in girls and positive in boys). However, in boys, this irrelevant relationship remains stable across the three age ranges; whereas, in girls, the following results were obtained: in AR1, the correlation is low; in AR2, it is null; and in AR3, it is low again, and always with a negative sign.
3. In the total sample of girls and boys, Concern about illness (F3) has a moderate-to-low correlation with Concern about physical shape/Satisfaction with physical shape (F4). In boys, the magnitude of the correlation remains stable as age increases; however, in girls, the correlation is moderate-to-low in AR1 and becomes irrelevant as age increases.
4. In the total sample of girls and boys, Concern about illness (F3) has no relationship with HW, and despite varying slightly, as age increases, it remains stable in both boys and girls.
5. In the total sample of girls and boys, Concern about physical shape/Satisfaction with physical shape (F4) has a low-to-moderate correlation with HW. In both, this relationship is moderately low in AR1 and increases with age until it reaches a moderate correlation in AR3.

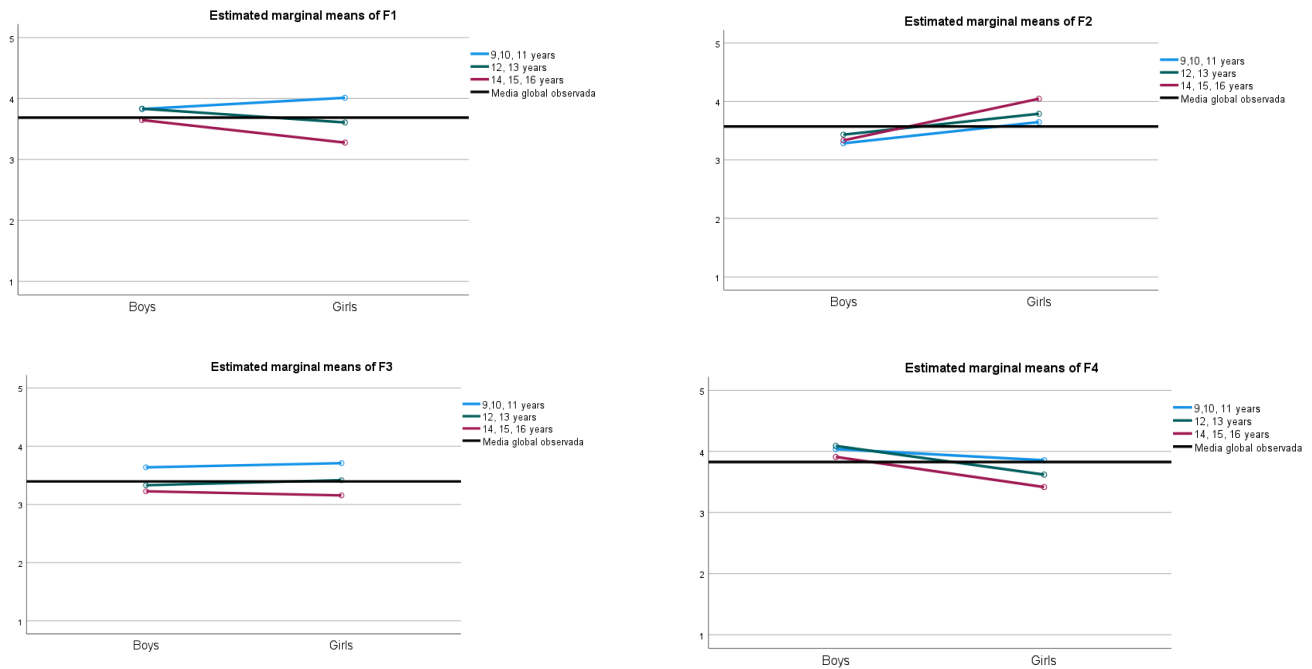
*Divergences in the pattern of correlations between boys and girls.*

1. In the total sample of girls, Satisfaction with appearance (F1) is not correlated with Concern about appearance (F2), and the correlation is small in the entire sample of boys. However, when observed in the three age ranges, in boys, the magnitude of the correlation remains stable as age increases, but in girls, the correlation is moderate-to-high in AR1, small in AR2, and null in AR3.
2. In the total sample of girls, Satisfaction with appearance (F1) shows a slight correlation with Concern about illness (F3), and there is no relationship in the total sample of boys. However, although the relationship observed in the full sample varies slightly when observed in the three age ranges, it could be said that it remains stable overall.
3. In the total sample of girls, Satisfaction with appearance (F1) has a null correlation with HW, and the full sample of boys has a small-to-moderate correlation. However, in boys, the magnitude of the correlation remains stable as age increases, but in girls, the correlation is irrelevant in AR1, reaches a low magnitude in AR2, and is null in AR3.
4. In the total sample of girls, Concern about appearance (F2) has an irrelevant correlation with Concern about illness (F3), and the full sample of boys has a small-to-moderate correlation. However, in both boys and girls, the magnitude of the correlation is moderate-to-high in AR1 and decreases with increasing age (with slight variations in boys and girls).
5. In the total sample of girls, Concern about appearance (F2) has a null correlation with Concern about physical shape/Satisfaction with physical shape (F4), and the total sample of boys has a small-moderate correlation. However, in boys, the magnitude of the correlation remains stable as age increases. In girls, it reaches the irrelevant correlation level, which remains stable in the three age ranges.

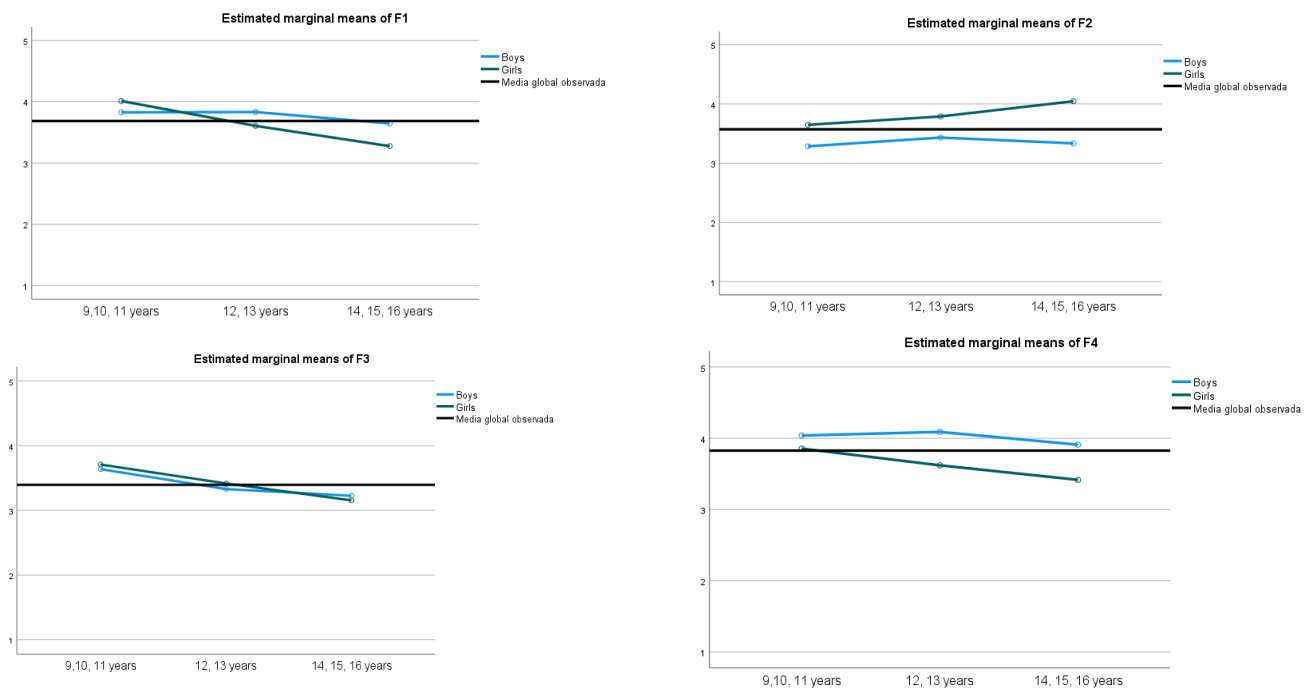
### 3.4. Examination of the Differences in the Four Factors of the MBSRQ-S<sub>A-a</sub> Based on Sex and the Three Age Ranges That Define the Evolutionary Stage in Which Young People Are At

#### 3.4.1. Results of the Inferential Analysis: MANOVA

These results are shown numerically in Table 3 and graphically in Figures 2 and 3.



**Figure 2.** Graphical representations of the interaction (Sex × Age range) in each of the factors. Estimated marginal means of the three age ranges examined in each sex. The horizontal line represents the total mean in the corresponding factor.



**Figure 3.** Graphical representations of the interaction (Sex × Age range) in each of the factors. Estimated marginal means of each sex in the three age ranges examined. The horizontal line represents the total mean in the corresponding factor.

**Table 3.** Summary of the simple effects of the statistically significant interaction of the MANOVA model (Sex × Age Range) and summary of the discriminant analysis.

MANOVA Results.Simple Effects of the Variable Sex IN Each Age Range and Differences of Means									
Simple effects		Differences of means in each of the factors							
Age		F1	F2	F3	F4				
9–11	[ $\Lambda = 0.968$ ; $F^{A,B} = 5.85$ ; $p < 0.001$ ; $\eta^2 = 0.032$ ]	----	$G^* - B = 0.363$ ; $p = 0.001$	----	$B^* - G = 0.183$ ; $p = 0.027$				
12–13	[ $\Lambda = 0.929$ ; $F^{A,B} = 13.63$ ; $p < 0.001$ ; $\eta^2 = 0.071$ ]	$B^* - G = 0.226$ ; $p = 0.016$	$G^* - B = 0.357$ ; $p = 0.001$	----	$B^* - G = 0.469$ ; $p < 0.001$				
14–16	[ $\Lambda = 0.844$ ; $F^{A,B} = 32.85$ ; $p < 0.001$ ; $\eta^2 = 0.156$ ]	$B^* - G = 0.370$ ; $p < 0.001$	$G^* - B = 0.711$ ; $p < 0.001$	----	$B^* - G = 0.493$ ; $p < 0.001$				
MANOVA results.Simple effects of the age range variable in each Sex and Differences of means									
Sex	Simple effects	Differences of means in each of the factors							
Boys	[ $\Lambda = 0.960$ ; $F^{C,B} = 3.62$ ; $p < 0.001$ ; $\eta^2 = 0.020$ ]	----	----	$Ag_1^* - Ag_2 = 0.308$ ; $p = 0.015$	----				
Girls	[ $\Lambda = 0.856$ ; $F^{C,B} = 14.31$ ; $p < 0.001$ ; $\eta^2 = 0.072$ ]	$Ag_1^* - Ag_2 = 0.405$ ; $p < 0.001$	$Ag_3^* - Ag_1 = 0.399$ ; $p = 0.001$	$Ag_1^* - Ag_2 = 0.292$ ; $p = 0.048$	$Ag_1^* - Ag_3 = 0.545$ ; $p < 0.001$	$Ag_1^* - Ag_2 = 0.235$ ; $p = 0.020$	$Ag_2^* - Ag_3 = 0.204$ ; $p = 0.034$	$Ag_1^* - Ag_3 = 0.439$ ; $p < 0.001$	
		$Ag_2^* - Ag_3 = 0.331$ ; $p = 0.001$							
		$Ag_1^* - Ag_3 = 0.736$ ; $p < 0.001$							
Discriminant analysis Results. Grouping variable: the combination of levels (Sex × Age) [% $\sigma_{AC} = 96.5$ ; %Clas = 35.94%]									
Coefficients S.					Centroids				
	f1	f2	Girls (Age Range)			Boys (Age Range)			
f1 [Av = 0.372; % $\sigma = 82.4$ ; Rc = 0.521; $\Lambda = 0.673$ ; $\chi^2 = 282.51$ ; $p < 0.000$ ]	<b>F1</b> <sup>3</sup>	0.410	0.597	<b>9–11</b>	<b>12–13</b>	<b>14–16</b>	<b>9–11</b>	<b>12–13</b>	<b>14–16</b>
f2 [Av = 0.066; % $\sigma = 14.5$ ; Rc = 0.249; $\Lambda = 0.923$ ; $\chi^2 = 56.78$ ; $p < 0.000$ ]	<b>F2</b> <sup>2</sup>	−0.776	0.121	f1	0.222	−0.442	−1.134	0.613	0.450
	<b>F3</b> <sup>4</sup>	0.206	0.697	f2	0.519	0.177	−0.088	0.075	−0.198
	<b>F4</b> <sup>1</sup>	0.572	−0.576						−0.297

Note: In MANOVA results [ $\Lambda$  and  $F$  = Wilks' lambda test statistic and its transformation into Fisher's  $F$ ;  $A$  and  $C$  = degree of freedom in the numerator and in the denominator ( $df_1$ ;  $df_2$ ).  $A = (4; 710)$  and  $C = (8; 1420)$ ;  $B$  = the empirical power of the statistical test ( $1 - \beta$ ) > 0.95;  $\eta^2$  = the partial  $\eta^2$ . Partial  $\eta^2$  of the SPSS can easily be transformed into  $\eta^2$  [41];  $p$  =  $p$ -value; \* = indicates the highest mean; B = Boys; G = Girls;  $Ag_1$ ,  $Ag_2$  and  $Ag_3$  = Age 9–11, 12–13, and 14–16 years old; ---- = no difference in means has been statistically significant]; In Discriminant analysis results [% $\sigma_{AC}$  = percentage of cumulative variance in the set of statistically significant functions (indicated when more than one is statistically significant); %Clas = percentage of subjects correctly classified using the discriminant function; Coefficients S. = standardized coefficients of the discriminant functions statistically significant; f1 and f2 = discriminant functions 1 and 2; Av = eigenvalue; % $\sigma$  = Percentage of variance explained; Rc = canonical correlation;  $df$  f1 and f2 = 20 and 12, respectively; superscript in F1, F2, F3, and F4 indicates the order in which the variables have entered the model of the discriminant function]. For the rest, see Table 1.

MANOVA ( $S \times AR$ ;  $2 \times 3$ ) revealed that the interaction was statistically significant [ $\Lambda = 0.947$ ;  $F = 4.872$ ;  $df_1 = 8$ ,  $df_2 = 1420$ ;  $p < 0.001$ ;  $\eta^2 = 0.027$ ;  $1 - \beta = 0.999$ ] and therefore it can be concluded that the difference between boys and girls in the set of Factors F1, F2, F3, and F4 is moderated by age.

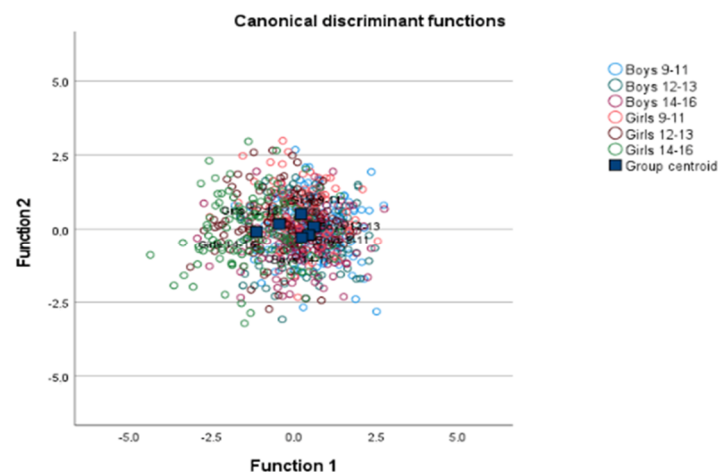
All simple effects were statistically significant (see Table 3) but not equally relevant. The size of the effect to differentiate between the three age ranges is greater in girls, and the size of the effect to differentiate between boys and girls increases as the age increases, reaching a moderate magnitude in the range of 14–16 years. This is the largest magnitude found.

The upper part of Table 3 shows that boys and girls do not differ in F3 in any age range. It can be observed that, in F2, girls have a higher mean than boys in the three age ranges, and the difference is stable up to 13 years—the age at which girls statistically distance themselves significantly from boys. On the other hand, it is shown that boys have a higher mean than girls in F1 and F4. The difference is very small at the youngest age (9–11 years) and is only statistically significant in F4. In F1, the difference increases as the age increases. In F4, the distance reached at 12 years between boys and girls is maintained at 14–16 years old.

The middle part of Table 3 shows the simple effects of age on boys and girls. In boys, only statistically significant differences exist between the age ranges in F3. The average is slightly higher with increasing age, but the level reached at 12–13 years does not differ significantly from the level reached at 14–16 years. Regarding girls, the change experienced in F3 is practically the same as in boys. However, in F1 and F4, there are statistically significant differences between the three age ranges. In both variables, the evaluation is less positive as the age increases, and the change experienced by the Evaluation is greater in F1 than in F4. In F2, the change occurs inversely. The mean is significantly higher at the 14–16 years age range than at the 9–11 years age range. Figures 2 and 3 contains the graphs that support these results and provides help regarding how to interpret them.

#### 3.4.2. Results of the Inferential Analysis: Discriminant Analysis

These results are shown numerically in Table 3 and graphically in Figure 4.



**Figure 4.** Graphical representation of the discriminant canonical functions.

The discriminant analysis provided information that is complementary to the results revealed by MANOVA.

The discriminant analysis revealed that two discriminant functions were statistically significant and that the four factors were relevant to differentiate between the six subgroups of young people. The first function explains 82.4% of the variance with a high effect magnitude ( $R_c = 0.521$ ) and allows girls aged 12–13 and girls aged 14–16 to be differentiated from the rest (see centroids in Table 3). The variable with the most strength in this differentiation

is F2, followed by F4 and F1 (with similar strength). Girls aged 14–16 are characterized by a high score in F2. This is also true for girls aged 13–14 years old, but their F2 scores are much lower than that of the older girls. The rest of the subgroups are characterized by having a very low score in F2. In turn, girls aged 14–16 have very low scores in F1 and F4, along with those aged 13–14, but less low than older ones. However, the rest of the subgroups are characterized by having high scores in F1 and F4.

The second function explains 14.4% of the variance with a medium effect magnitude ( $R_c = 0.249$ ) and allows us to differentiate mainly boys aged 12–13 and boys aged 14–16 from girls aged 9–11 and girls aged 12–13 (see centroids in Table 3). The variables with the most strength in this differentiation are F3, F1, and F4, all of which are in a similar magnitude. Boys over 12 years of age are characterized by having a high score in F4 (more the greater the age), while girls 14–16 years of age are characterized by having a high score in F4, albeit their score is very far off that of boys over 12 years of age. Boys older than 12 have low scores in F1 and F3. On the other hand, what characterizes the 9–11-year-old and 12–13-year-old girls is their high scores in F1 and F3, which are higher among the younger girls (also in the 9–11-year-old boys, but less so than the girls). Girls that are 9–11 years old and 11–13 years old are also characterized by low scores in F4 (girls 9–11 years old less than the other two subgroups). In Figure 4, all the nuances that have revealed the magnitude and direction of the centroids and the standardized coefficients of each discriminant function can be observed.

#### 4. Discussion

A dual-purpose comparative causal investigation was carried out. The first purpose was to evaluate the pattern of body image among Spanish young people from the perspective of the four dimensions of the MBSRQ- $S_{A-a}$  to gain insight into five aspects: (a) if the BI pattern is the same or different in both sexes, (b) if the BI pattern is the same or different in the three developmental stages in the 9–16 years age range, (c) if the BI pattern is different in both sexes and if it is moderated by age, (d) to observe how the four factors are related to each other and to what extent each is related to the time young people spend doing extracurricular sports, and (e) to observe the strength of the four dimensions of the MBSRQ- $S_{A-a}$  to differentiate between young people of specific sexes and ages. The second purpose was to gain a greater knowledge of the fluctuation or stability of the BI pattern in a representative sample of young pre-adolescents and adolescents (9–16 years) under *normal conditions*, as defined in the *Procedure* section (point 2.2. of the *Method* section, Section 2) and to establish a reference that serves to both identify young people to whom the aforementioned *normal parameters* apply and young people who move away from or deviate from these parameters. Because the MBSRQ- $S_{A-a}$  questionnaire has satisfactory psychometric reliability and validity characteristics and because its dimensionality is invariant based on sex and the three age ranges studied, this dual purpose is carried out in research that can qualify as confirmatory research. All of the results found in our research converge and agree that the pattern of body image among Spanish young people aged between 9 and 16, from the perspective of the four dimensions of the MBSRQ- $S_{A-a}$ , different between boys and girls. Furthermore, this pattern is dynamic. In other words, the BI pattern changes as the three evolutionary stages of adolescence that we have represented in the three age ranges studied follow one another, and the change that it undergoes is different in both sexes.

The pattern of body image in these three substages of adolescence is, with few exceptions, relatively stable in boys and very unstable and convulsive in girls. Therefore, it cannot be generalized for both sexes in any of the three evolutionary substages. It has been verified that, in 4 of the convergent relationships (Cv) and in 4 of the divergent relationships (Dv) between boys and girls, the boys remained stable in the three evolutionary substages [Cv: F1–F4; F3–F4; F1–HW; F3–HW] and [Dv: F1–F2; F1–F3; F1–HW; F2–F4], and the girls only remain stable in the three evolutionary substages in two relationships [Cv: F3–HW] and [Dv: F1–F3].

This leads to differences in BI that may be associated with each sexes' evolutionary maturation process. While noticeable bodily changes occur later in boys (from 16 to 18 or 20 years), physical changes in girls occur more prematurely and abruptly, causing them to become a focus of attention and concern earlier [12]. Therefore, the instability observed in girls in the age range studied is unsurprising, as they are young people in the process of maturation, exposed and susceptible to the abundance of information shared through the media, especially on social networks [13]. Pressure campaigns regarding beauty ideals are becoming more frequent, especially campaigns aimed at younger girls, despite the fact that, at the earliest ages, young girls do not have the sufficient intellectual maturity or life experience to discern what is for them healthy or not [3]. They are not mature enough to adopt and maintain a critical stance toward the information they receive.

It is possible to verify, both in men and women, that, in the three evolutionary sub-stages examined, practicing physical activity after school hours is in no way related to concern for health or illness. This phenomenon could be explained from the evolutionary perspective of human development, i.e., young people do not perceive potential disease as a threat because, for them, a lifetime is unlimited, unlike adults, for whom the probability of suffering from disease is a more real and likely possibility [42]. It is also possible to verify that, between the ages of 9–11, both in boys and girls, *Concern about physical shape/Satisfaction with physical shape* has a moderate-to-low correlation with partaking in outside of school and increases as age increases until it reaches a moderate-to-high correlation for those aged between 14 and 16 years. This points to the hypothesis that *Concern about physical shape/Satisfaction with physical shape* at an early age is not determinant when partaking in sports or physical activity (it would be more associated with enjoying time with others or with improving self-esteem, for example), but this factor does increase with age, which is perhaps linked to a general dissatisfaction with body image. At more advanced adolescent ages, physical activity is considered as an instrument that can benefit the body and help maintain or achieve a satisfactory body image [4].

In light of the previous results, it could be said that the increase in hours invested in physical activity and sports outside of school hours as age advances are related to the desire to look strong and physically capable, interpreting this behavior as interest in modeling the body and muscle building and not to improve health and well-being. Some adolescents could develop a compulsive behavior with physical exercise in order to balance caloric intake to maintain an ideal weight and body shape, especially when the adolescent is perceived to be overweight [12]. This process could be influenced by standardized ideals of social beauty and physical appearance [43] and a lack of awareness that excessive physical activity carried out excessively can be detrimental to one's health [12,44,45]. Injuries sustained during adolescence can cause short-term discomfort and have severe consequences in the future [46,47]. It is necessary for responsible adults such as parents, coaches, and health professionals to educate young people about the risks of overtraining and encourage them to maintain a healthy balance in their exercise schedules. In the same way, parents who observe these disproportionate exercise behaviors in their children should be attentive to the cause that provokes them in case it masks any alarming underlying behaviors—for example, an extreme desire to be thin (anorexia, bulimia, etc.), wanting to improve a particular aspect of their bodies to become more accepted by others, or if your son/daughter is the victim of pressure from social networks.

Other differences and convergences found in this study are notable between both sexes. In females, at the age of 9–11, there is a strong relationship between *Satisfaction with appearance* and *Concern about appearance* and *Concern about physical shape/Satisfaction with physical shape*, and both relationships weaken as the developmental stages progress. On the contrary, the relationship between *Concern about physical shape/Satisfaction with physical shape* and *Hours a week you do sports outside of school* at 9–11 years of age is irrelevant, and as the evolutionary stages progress, it increases significantly, and the same occurs in males. In contrast, in males, as the evolutionary stages progress, the relationship between *Satisfaction with appearance* and *Concern about appearance* also weakens but does not reach

rock bottom, while the relationship between *Satisfaction with appearance* and *Concern about physical shape/Satisfaction with physical shape* instead of weakness becomes stronger.

This complex behavior regarding the relationships between *Satisfaction with appearance*, *Concern about appearance*, *Concern about physical shape/Satisfaction with physical shape*, and Hours a week you do sports outside school can help raise some interesting hypotheses. It is important to note significant differences in girls' perceptions of their physical appearance as they grow older. When girls are younger (9–11 years old), they feel satisfied with their physical appearance and their body image; they like themselves, they look pretty and attractive, and they are comfortable with their weight, especially when there are no self-esteem problems [23]. Satisfaction with physical appearance is more linked to play situations and sharing with others as a way of socializing and interacting with other children. However, as girls grow older and become more aware of cultural and societal expectations regarding beauty and physical appearance, there is a disconnect between viewing physical activity as a means to improve one's health and viewing it as play. The interest in looking pretty changes its objective, and disordered eating behaviors, e.g., weight-loss diets or extreme self-imposed caloric restrictions [48–51], may appear, potentially leading to eating disorders such as anorexia nervosa or bulimia nervosa, which not only affect the physical and mental health of adolescents but also have severe consequences at later ages. On the contrary, as boys age, everything indicates that partaking in sports or being physically fit can contribute towards liking themselves more in a physical sense. In other words, they partake in sports and physical activity to feel attractive [52]. The problem is that, in both cases (boys and girls), they do not exercise to benefit their health. Instead, they exercise in response to a social demand for a beautiful body, even though they try to achieve it differently.

This disconnect between physical activity and satisfaction with one's own body does not necessarily indicate that girls are not concerned about their physical appearance; on the contrary, the girls who are concerned about their physical appearance could be those who look physically impaired or those who, having a remarkable physical appearance or beauty, are never satisfied with their body image and need to continue improving it through sports or taking care of their diet. This is, without a doubt, a very interesting and far-reaching point that needs to be investigated in depth in subsequent research. Among girls, the greater degree of objectification and the greater use of social networks serves to reaffirm their body image at ever-younger ages. This, together with greater social pressures concerning body beauty compared to boys, causes girls to more thoroughly self-monitor their bodies [53–55]. A study by Mahon and Hevey [56] on adolescents aged 15 and 16 echoes this, as the girls under study stated that social networks negatively influenced their body image. In contrast, for boys, the influence was positive. This negative view that girls have of themselves is explained by the fact that, even when they have weight levels that are considered normal, they are still worried about being or staying thin and terrified of becoming fat. This degree of concern increases in those who are overweight and obese [17]. The question is, whether slim or not, weight and body image continue to influence the behavior of young people as if it were a matter of life or death when, in reality, it is a matter of stereotype and social fashion.

In this study, only seven years of life have been considered (the adolescence stage), but it is possibly the most convulsive, unstable, and vulnerable stage of human development. At these ages, adolescents perceive life as unlimited in time; they need to experiment with everything, and social networks play a determining role in building their body image and personal identity. In today's society, where information flows quickly, and the immediacy of things is relevant, where gender identities and sexual roles are intermingled and take on a different prominence, where there is a perceived need to fit into the models that social networks reflect (e.g., gender non-binary) could lead many adolescents to frustration, permanent dissatisfaction, and even hopelessness, making them liable to fall into depressive states with dire consequences. Several studies have shown that girls experience more social pressure to have an ideal body than boys [57], and, in some cases, parents play a crucial role



in this process, especially at an early age [58]. In all of this, the role that the parents of these adolescents play is crucial [59,60], and research must also be oriented in that direction.

#### 4.1. Strengths of the Study and Limitations

Earlier in this study, the discriminative power of the MBSRQ-S<sub>A-a</sub> questionnaire was empirically tested; therefore, so too was its empirical validity. Hence, based on the strength of the results found and the convergence with the results of multiple investigations worldwide, it can be concluded that the results reported in this study are reliable and valid. It has been empirically demonstrated that the MBSRQ-S<sub>A-a</sub> allows for the identification of differences between boys and girls in the three aforementioned age ranges. However, this research is not exempt from the limitations already outlined in [23]. The first limitation is that it would have been desirable for the sample to include 17 and 18-year-olds. However, this was not possible, as the centers refused due to the proximity of the entrance exam to the university. Additionally, it was not possible to study the stability of the research because only 25 people decided to perform the re-test. It would be desirable to carry out longitudinal research to evaluate the evolution or trend of the response in body image pattern among young people in the pre-adolescent and adolescent years [61,62], and examine whether there are significant differences based on different social contexts (e.g., population density, the country where they live, etc.) [63].

#### 4.2. Practical Implementations

One of the most relevant practical implications, from our point of view, is that, having demonstrated the empirical validity of the questionnaire, it could be said that these results are a reference for the pattern of body image in normal conditions found in everyday life and will serve to compare the pattern of body image of young people living in Spain in conditions that are deviant or far from these parameters and to identify young people who live in the conditions observed here.

Thus, the results of this research may lead us to continue investigating several related aspects, including the following:

1. Studying the validity of the MBSRQ-S<sub>A-a</sub> questionnaire to identify young people with different psychological, emotional, and behavioral problems where body image is an important variable. If this identification is possible, preventing and treating more serious mental, behavioral, emotional, and physical health problems would also be possible.
2. It is possible that these results can be extrapolated to young people from other cultures and ethnic groups. However, it is possible that this only happens in places where young people's access to the information transmitted by the media or disseminated via social networks is similar to the media consumed by the sample participants of this study.
3. The different hypotheses drafted during this Discussion section (Section 4), derived from reflections on the results reported in our study, should be tested.

### 5. Conclusions

Due to the results we obtained, we believe that this research can provide relevant and helpful information to specialists and parents of adolescents to help them alleviate the adverse physical, psychological, and social effects of the cult of the body for those they are treating and/or responsible for, helping to raise awareness of the influence that body image and external judgments have on our lives, especially in that of young people. At the same time, we believe that these results justify the need to promote contingent programs to promote values and attitudes that encourage acceptance and respect for body diversity and a more realistic and healthy vision of it. Lastly, in general, we understand that it is necessary to construct a more solid and autonomous social identity that does not depend exclusively on external acceptance and recognition.

In short, these results should help contribute to sustainable personal development and, by extension, to sustainable human development.

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