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Article

Gender-Typed Sport Practice, Physical Self-Perceptions, and Performance-Related Emotions in Adolescent Girls

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Abstract: Youth sport experience provides opportunities for physical, personal, and social development in youngsters. Sport is a social system in which socially constructed gender differences and stereotypes are incorporated, and specific sport activities are often perceived as gender characterized. The objective of this study was to examine the relationship between some salient physical and emotional self-perceptions and the type of sport practiced. A sample of 261 female athletes, aged 14–21 years (Mage = 15.59, SD = 2.00), practicing different sports, categorized as feminine (e.g., artistic and rhythmic gymnastics), masculine (e.g., soccer and rugby), or neutral (e.g., track and field and tennis), took part in a cross-sectional study. Significant differences were observed between aesthetic sports and other types of sports. Athletes involved in aesthetic sports reported the lowest values in their feelings of confidence and the highest values in feelings of worry related to competition. This may be attributed to the evaluation system of aesthetic sports, in which the athlete's performance is evaluated by a jury. At the same time, they reported low values of dysfunctional psychobiosocial states associated with their general sport experience, likely because of their physical appearance close to the current body social standards for girls. Notwithstanding the differences by type of sport, athletes of all disciplines reported high mean values of functional psychobiosocial states, suggesting that their overall sporting experience was good.

Keywords: physical self-perception; body dissatisfaction; social physique anxiety; psychobiosocial states; aesthetic sports; feminine sports; masculine sports

1. Introduction

The sport environment is commonly considered an important development context in which young athletes can acquire sport skills and attain psychological benefits, such as improved self-perception, motivation, coping, and emotion regulation skills [1–4]. However, it has long been recognized that boys and girls are socialized differently, through gender-stereotyped beliefs and behaviors in the family, physical education classes, and sport contexts where girls and boys are not encouraged in the same way [5]. In Italy, gender disparities in sport participation have been observed in 11–19 years old girls (41% girls vs. 59% of boys; [6]). Of note, female athletes of all ages represent 28% of the entire

sport population [7]. Despite the large importance attributed to sport practice, the sport experience of adolescent girls has not been widely investigated. Thus, the main purpose of our study was to examine, in a sample of girls, possible differences in relevant individual variables (e.g., perceived competence, physical self-perception, self-esteem, anxiety, and emotional states) as a function of gender-typed sports (i.e., masculine, feminine, or neutral).

Sport is a social system in which socially constructed gender differences and stereotypes are incorporated into its structure [8]. Specific sport activities can be perceived and classified as masculine, feminine, or neutral [9–12]. Masculine sports often involve characteristics such as physical contact, strength, face-to-face opposition, fighting, aggressiveness, danger, and risk. Feminine sports are frequently typified by expressivity, grace, flexibility, and emotional expression. Some individual sports (e.g., tennis, swimming, and badminton) are considered neutral, whereas team sports are generally regarded as masculine, except for volleyball, probably because the two rival teams are separated and do not come into physical contact. Given that the sport environment is a powerful social context for both female and male athletes, their body image is generally positive when "gender-appropriate" sports are practiced [13].

As a consequence of the physical requirements associated with sport practice, all athletes pay specific attention to their bodies and spend time and energy to develop their physical fitness, athletic skills, and sport strategies. In aesthetic sports, the focus is also on improving appearance, because athletes' bodies are evaluated during execution together with performance. This can influence the athletes' physical self-concept and body image, two theoretical constructs widely applied in sport psychology.

Physical self-concept is posited as one of the domains within the multidimensional model of self-concept, defined as a person's self-perceptions formed through experience with and interpretations of their environment [3,14,15]. A number of physical self-concept measures have been developed to identify specific aspects (e.g., endurance, strength, and health), in addition to global physical self-concept and global self-esteem [16]. Research findings have indicated consistent gender differences, with boys scoring higher on physical self-concept and self-esteem than girls [17]. In a large group of adolescent boys and girls, athletes and non-athletes, Marsh [18] found systematically higher physical self-concept in athletes than in non-athletes, with girls showing higher differences than boys. In early adolescent girls, physical activity [19] and organized sport practice [20] were positively linked to physical self-concept, while better performance in fitness tests was found to improve their physical self-concept, perceived competence, and self-esteem [21]. In a recent approach to self-concept facets that are domain-specific. In the sport context, sport-specific competence perceptions can represent the instrumental or functional qualities of the body. Functional qualities may also influence the general perceptions that people have of their bodies and be associated with pleasant feelings [22].

Body image is another theoretical construct that has received extensive research attention, as it is related to physical self-perception mainly in girls and women. Body image is a broad term that refers to a multifaceted psychological experience of embodiment, involving perceptions, thoughts, behaviors, and feelings about one's own body, with special attention, though not exclusively, to physical appearance [23]. Varnes et al. [24] proposed the term body image as an umbrella term encompassing other constructs, such as body (dis)satisfaction, appearance evaluation, appearance (dis)satisfaction, and body appreciation. Body dissatisfaction is particularly widespread among adolescents in Western cultures, in which emphasis on body image and appearance is especially present in young women. Body dissatisfaction is often related to low self-esteem [25] and unpleasant emotional states, such as feeling unhappy, sad, and depressed [26]. In a meta-analysis of 34 studies, body dissatisfaction was found to be lower in female athletes compared to female non-athletes [27]. Regarding differences in body image by type of sport, studies were conducted using different gender-typed sport classification, including aesthetic, endurance, and ball game sports [28]; appearance-focused, non-appearance focused, lean-focused, non-lean focused, non-appearance/non-lean focused sports [24]; aesthetics and

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leanness, leanness but not aesthetics, neither aesthetics nor leanness sports [29]. These studies showed inconsistent results.

Body dissatisfaction has been associated with social physique anxiety, a social psychological variable conceptualized as a trait characteristic that reflects an individual's concern in situations in which physique or figure is being observed or evaluated [30]. High levels of social physique anxiety have been reported in adolescence, more in girls than in boys, and are linked with unhealthy eating attitudes and behaviors. Social physique anxiety has been identified in female athletes in a wide variety of sports, but no clear evidence exists regarding the type of sport [31].

Competition is the essence of sport, a context in which athletes, either alone or as part of a team, seek to outperform other athletes or teams. In specific competitive situations, in which individuals strive to attain important and self-relevant goals, some personal characteristics are relevant, such as confidence and worry. Confidence is generally described as a feeling of trust in one's abilities, qualities, and judgment, and it indicates positive beliefs about personal abilities or expectations of being able to succeed [3]. In the sport context, Vealey and colleagues [32–34] proposed a specific sport-confidence multidimensional model for success. Two of the dimensions acting as sources of confidence in sport—namely, physical self-presentation and social support—were more important sources for female than male athletes, thereby highlighting the role of body image and social evaluation for female athletes' confidence [34]. Worry, initially contrasted to confidence in a single bipolar construct [35], is currently considered as the cognitive component of anxiety, along with negative expectations, doubt, and apprehensions about performance. In the sport setting, worry has been defined as a cognitive form of harmful apprehension associated with performance under pressure [36].

To broadly examine emotional experiences in sport, we assessed psychobiosocial states as conceptualized within the individual zones of optimal functioning (IZOF) model [37]. In a holistic approach, psychobiosocial states are conceived as situational, multimodal, and dynamic manifestations of total human functioning that represent the athlete's perceptions of personal and environmental conditions. Psychobiosocial states encompass at least eight emotional and non-emotional interactive modalities (i.e., affective, cognitive, motivational, volitional, bodily somatic, motor-behavioral, operational, and communicative) deemed to have a functional or dysfunctional effect on performance and overall sport experience [38–40]. Of note, three of the modalities pertain to physical aspects: bodily somatic, motor-behavioral, and operational. In a study in youth sport, boys were found to report significantly higher scores for functional psychobiosocial states than girls [41]. Extensive research has shown the benefits of assessing psychobiosocial states in youth sport for both theoretical and applied purposes [42–44].

Purpose of the Study

Several studies examining differences in body constructs between athletes and non-athletes showed a positive influence of sport participation. In a recent review, Sabiston et al. [45] highlighted the need to understand sport-specific differences and recommended examining this area in future research. Accordingly, the main purpose of the present study was to examine possible differences in physical self-perceptions and emotional aspects in a sample of girls practicing different gender-typed sports (masculine, feminine, or neutral). Athletes were placed into four groups: individual feminine sports, individual neutral sports, team feminine sports, and team masculine sports.

Based on the previous literature on female athletes, we hypothesized that:

- (a) Girls practicing gender-appropriate (feminine) sports would have better global physical self-perception and less body dissatisfaction than girls involved in neutral and masculine sports, given that the body image of athletes is generally positive in "gender-appropriate" sports [13].
- (b) Girls practicing individual feminine, aesthetics sports, such as gymnastics and figure skating, would report higher scores in worry and social physical anxiety, and lower scores in confidence compared to other types of sports. This hypothesis is based on the competitive structure of

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aesthetic sports, where competition outcomes depend on individual performance and outlook that are evaluated by a jury. Moreover, in this kind of sports much attention is paid to several aspects of physical appearance, including the aesthetics of technical form (i.e., gracefulness), body shape, make-up and hair, and sportswear [24].

(c) Regarding global self-esteem, specific sport competence, and psychobiosocial states, no differences were expected by sport type. Indeed, these factors referring to different aspects of a person's experience also depend on the psycho-social environment of the sport context (e.g., social support, environmental comfort, and motivational climate [34]).

2. Materials and Methods

2.1. Participants and Procedure

A sample of 261 female athletes, aged 14–21 years (Mage = 15.59, SD = 2.00), was involved in our cross-sectional study. The participants were drawn from sport clubs located in Central Italy involved in four gender types of sport: 65 practicing individual feminine sports (artistic gymnastics n = 31, rhythmic gymnastics n = 6, figure skating n = 12, dance sport n = 9, synchronized swimming n = 7), 60 practicing individual neutral sports (track and field n = 26, tennis n = 19, swimming n = 8, fencing n = 7), 68 practicing team feminine sports (volleyball), and 68 practicing team masculine sports (basketball n = 25, soccer n = 24, futsal n = 9, handball n = 4, and rugby n = 6). The participants were usually engaged for a minimum of three training sessions per week, 2 h each.

The study was conducted after approval from the local ethics committee (n. 1813/09coet) and was in compliance with the ethical standards outlined in the Declaration of Helsinki. Sport managers and coaches gave their consent to conduct the study after explaining the general purpose of the investigation to them. Eighteen-year-olds signed informed consent, while minors provided written assent and their parents signed informed consent. Athletes were assessed before regular practice sessions during the competitive season, within training facilities, in quiet locations in groups of up to five participants. They were assured that individual responses would remain strictly confidential and it was explained that there were no right or wrong answers. Instructions designed to minimize social desirability biases were also provided.

2.2. Measures

2.2.1. Sport-Specific Competence

To assess the perceived sport-specific competence, we used a single item with an 11-point Likert-type scale ranging from 1 (very poor) to 11 (excellent), referring to body functionality in a sport-specific context. The participants were asked to rate their level of perceived physical and technical sport skills during training and competition. Tenenbaum et al. [46] provided a strong rationale for the use of single-item scales which, similarly to this item, have a high face validity and have been used in previous research in sport [47].

2.2.2. Physical Self-Perception

For the purposes of our study, we employed two scales of the Italian version of the Physical Self-Perception Questionnaire (PSDQ [48]), originally developed by Marsh, Richards, Johnson, Roche, and Tremayne [16]: the global physical self-perception scale (feeling positive about one's physical self—e.g., "I feel good about the way I look and what I can do physically") and the global self-esteem scale (overall positive feelings about self—e.g., "Overall, I have a lot to be proud of"). Each PSDQ item is a simple declarative statement to which the participants respond using a 6-point Likert scale ranging from 1 (false) to 6 (true). In the Italian version, internal consistencies resulted in being acceptable for the global physical self-perception and global self-esteem scales, with Cronbach's alphas of 0.90 and 0.77 in girls, respectively [48].

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2.2.3. Body Dissatisfaction

The adapted version [49] of the Figure Ratings Scale (FRS; [50]) was used to measure body shape dissatisfaction. The scale contains seven schematic figures ranging from an underweight silhouette to an extremely obese silhouette. We chose this version because it proposes a continuous measure (from 1 to 70 points) rather than a discrete scale (from 1 to 7), to avoid limited options of response and coarseness of the scale [51]. The participants were asked to indicate first the point most closely corresponding to their perceived actual body silhouette, and then the point most closely corresponding to their perceived ideal silhouette. The discrepancy between perceived and ideal size was used to determine body dissatisfaction.

2.2.4. Social Physique Anxiety

The 7-item version of the Social Physique Anxiety (SPA; [52]) was used to assess the participants' anxiety related to the social evaluation of their bodies, the degree of anxiety individuals experience as a result of perceived observation or evaluation of their physique. The scale includes statements such as "In the presence of others, I feel apprehensive about my physique". Each statement is evaluated on a Likert scale ranging from 1 (not at all) to 5 (extremely). A good reliability was found for an Italian version applied to a sample of non-clinical women ($\alpha = 0.85$; [53]).

2.2.5. The Sport Performance Psychological Inventory

A 48-item inventory was developed in the Italian language (IPPS-48; Inventario Psicologico della Prestazione Sportiva [54]) to measure psychological aspects in competition and a range of mental skills used by athletes. The items pertain to eight factors, which are further categorized into cognitive and emotion higher-order factors. For the purposes of the current study, we administered the items of two scales included in the emotion higher-order factor: confidence (e.g., "I am confident in my competitive abilities") and worry (e.g., "I feel panicked before competition"). Athletes are asked to think about each item in terms of how frequently they have experienced the feelings described before and during competition. Items are rated on a 6-point Likert-type frequency scale ranging from 1 (never) to 6 (always). A confirmatory factor analysis (CFA) showed that the IPPS-48 possesses a sound factorial structure and the ability to distinguish among athletes of different competitive levels. Cronbach's alphas of the two scales ranged from 0.82 to 0.92, and the test-retest reliability ranged from 0.85 to 0.94.

2.2.6. Psychobiosocial States

The psychobiosocial states scale, trait version (PBS-ST; [55]), was developed in the Italian language from the English version of the Individualized Profiling of Psychobiosocial States [56]. The PBS-ST scale is composed of 15 items, 8 functional and 7 dysfunctional, to assess seven modalities of a performance-related state (i.e., affective, cognitive, motivational, volitional, bodily somatic, motor-behavioral, and operational). Each item comprises 3 or 4 descriptors of a similar experience having a functional (+) or dysfunctional (–) effect on performance. Three modalities are related to physical aspects: bodily somatic—vigorous, energetic, physically charged (+) and physically tense, jittery, tired, exhausted(–); motor-behavioral—relaxed, coordinated, powerful, effortless movement (+) and sluggish, clumsy, uncoordinated, powerless movement (–); and operational—effective, skillful, reliable, consistent task execution (+) and ineffective, unskillful, unreliable, inconsistent task execution (–).

The participants in this study rated the intensity of the psychobiosocial items on a 5-point Likert scale, ranging from 0 (not at all) to 4 (very, very much), while thinking on how they usually felt in their sport setting. In a sample of male and female athletes from different sports [41], the two-factor (i.e., functional and dysfunctional) solution was supported, with chi-square/degrees of freedom (χ^2/df) = 1.478, a comparative fit index (CFI) = 0.950, a Tucker–Lewis index (TLI) = 0.942,

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root-mean-square error of approximation (RMSEA) (90% CI) = 0.038 (0.023-0.051), and standardized root-mean square residual (SRMR) = 0.048.

2.3. Data Analysis

Data were preliminarily scrutinized for missing values; distribution; possible univariate or multivariate outliers; and violations of assumptions of normality, linearity, multicollinearity, and homoscedasticity [57]. Descriptive statistics (mean \pm SD) and Pearson product-moment correlation coefficients (r) were computed for all the studied variables. The magnitudes of the correlation coefficients were interpreted according to Zhu's [58] indications—namely, 0–0.19 = no correlation; 0.20–0.39 = low correlation; 0.40–0.59 = moderate correlation; 0.60–0.79 = moderately high correlation; and > 0.80 = high correlation. Group differences in the dependent variables were assessed using a one-way analysis of variance (ANOVA) followed by Bonferroni post hoc comparisons. Estimates of the effect size (partial η^2) are provided for significant findings, with values of 0.01, 0.06, and 0.14 indicating small, medium, and large effects, respectively [59]. All the data analyses were conducted using SPSS® 26.0 (IBM Corporation, Armonk NY, USA) for Windows®/Apple Mac® with significance set at p < 0.05.

3. Results

Descriptive statistics for each variable by type of sport are reported in Table 1 together with the one-way ANOVA results. The ANOVA yielded significant results by sport type for confidence, worry, and dysfunctional psychobiosocial states. The post hoc analysis showed athletes involved in individual feminine sports (aesthetics) to report significantly lower scores for confidence than athletes in team either feminine and masculine sports. Moreover, they reported higher scores for worry compared to athletes in team masculine sports, and lower values for dysfunctional psychobiosocial states compared to athletes of all sports.

Table 1. Descriptive statistics and one-way ANOVA results by sport type.

Variable	Individual Feminine Sports $M \pm \mathrm{SD}$	Individual Neutral Sports M ± SD	Team Feminine Sports M ± SD	Team Masculine Sports M ± SD	F (1, 3)	p	η_p^2
Sport-specific competence	7.37 ± 1.08	7.43 ± 1.24	7.56 ± 1.47	7.65 ± 0.99	0.70	0.55	0.01
Physical self-perception							
Global physical scale	4.40 ± 1.22	4.48 ± 1.26	4.35 ± 1.38	4.43 ± 1.38	0.10	0.96	0.00
Global self-esteem scale	4.97 ± 0.63	4.74 ± 0.77	4.63 ± 0.86	4.66 ± 0.84	2.55	0.06	0.03
Body dissatisfaction	0.51 ± 0.79	0.70 ± 0.78	0.61 ± 0.73	0.49 ± 0.80	1.01	0.39	0.01
Social physique anxiety	2.43 ± 0.58	2.44 ± 0.70	2.41 ± 0.81	2.29 ± 0.62	0.70	0.56	0.00
Confidence	3.42 ± 0.94^{a}	3.83 ± 0.96	3.89 ± 0.76^{b}	3.93 ± 0.95 b	4.45	0.01	0.05
Worry	4.07 ± 0.97 a	3.61 ± 1.02	3.61 ± 1.05	3.32 ± 1.06 b	6.09	< 0.01	0.07
Psychobiosocial states							
Functional	2.55 ± 0.58	2.46 ± 0.64	2.41 ± 0.51	2.50 ± 0.54	0.72	0.54	0.00
Dysfunctional	0.32 ± 0.26 a	0.52 ± 0.41 b	$0.55 \pm 0.40^{\text{ b}}$	0.50 ± 0.48 b	4.48	< 0.01	0.05

Note: significant differences are indicated by different superscripts.

A correlation analysis (Table 2) indicated that confidence was negatively associated with worry and positively related to perceived sport-specific competence, global physical, global self-esteem, and functional psychobiosocial state scores. The global physical self-perception correlated with global self-esteem, body image, and social physical anxiety. Finally, global self-esteem was negatively related to dysfunctional psychobiosocial states and social physical anxiety. This latter variable correlated with body dissatisfaction. The magnitude of all these correlation coefficients ranged from low to moderate [58].

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Variable	(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)
(1) Sport-specific competence	-							
(2) Global physical perception	0.31 *	-						
(3) Global self-esteem	0.39 *	0.51 §	-					
(4) Body dissatisfaction	-0.17	−0.50 §	-0.29 *	-				
(5) Social physique anxiety	-0.23 *	-0.63 †	-0.32*	0.43 §	-			
(6) Confidence	0.43 §	0.38 *	0.44 §	-0.19	-0.26 *	-		
(7) Worry	-0.21 *	-0.27 *	-0.29 *	0.22 *	0.35 *	-0.39 *	-	
(8) Functional PBS states	0.36 *	0.22 *	0.37 *	-0.17	-0.15	0.45 §	-0.19	-
(9) Dysfunctional PBS states	-0.22 *	-0.26 *	−0.52 §	0.22 *	0.22 *	-0.23 *	0.28 *	-0.24

Table 2. Pearson product moment correlations between variables.

Note: correlation: * low, § moderate, † moderately high.

4. Discussion

The main purpose of our study was to investigate possible differences in physical self-perception and psychobiosocial states among adolescent female athletes practicing different gender-typed sports. We expected to find better global physical self-perceptions and lower body dissatisfaction in athletes practicing gender-appropriate (feminine) sports, and higher social physical anxiety and worry and lower confidence in athletes involved in individual feminine sports (aesthetics). No differences were hypothesized by sport types in terms of global self-esteem, specific sport competence, and psychobiosocial states.

We applied a gender-typed sport classification based on previous studies which recognized specific sport activities culturally perceived as masculine, feminine, or neutral [9–12]. In Italy, women's participation in sport confirms such classification: more than 70% of female athletes are involved in feminine sports (volleyball and aesthetics sport), between 20% and 50% participate in a neutral sport (such as tennis and track and field), and between 2% and 15% practice a masculine sport (such as soccer and rugby [7].

In contrast to our expectations, the overall results of our study showed significant differences only for confidence and worry as related to competition, and for dysfunctional psychobiosocial states as related to a more general experience in sport. Athletes in individual feminine sport (aesthetics) reported the lowest values in confidence and the highest values in worry. However, the lowest scores in their dysfunctional psychobiosocial states compared to those of the participants from other sports suggest that their overall sporting experience was good. Thus, significant differences were observed between aesthetic sports and other types of sports rather than among gender-typed sport categories (i.e., feminine, neutral, or masculine).

One of the theoretical classifications of sports contrasts purposive sports (the most part of sports) with aesthetic sports [60]. In purposive sports, the goal can be achieved in an indefinite variety of ways (clearly, within some rules or conventions controlled by referees), whereas in aesthetic sports the aim is closely related to the aesthetics of the performance assessed by the members of a jury who determine the final outcome (victory or defeat) in competition. Therefore, the athletes of aesthetic sports are aware that the performance result in competition depends on the subjective evaluation of their individual performance and outlook by a jury. This can explain the feelings of low confidence and high worry compared to athletes of other types of sports. Moreover, the lack of significant differences in social physical anxiety across groups suggests that worry in competitions for aesthetic sport athletes derives from performance assessment rather than physical appearance. Indeed, Prapavessis, Grove, and Eklund [31] suggested that people could participate in sports that emphasize their physique (aesthetic sports) because they are confident that they convey a favorable physical impression, with their physical appearance being close to the current bodily social standards. This may also explain the lowest values in the dysfunctional psychobiosocial states of athletes of aesthetic sports compared to athletes of other sports. These athletes display a kind of artistic dimension (including music, costume, grace, harmony, and elegance of movements) through which they exhibit their physical and technical skills [60]. Such artistic dimension could create a specific link to pleasant emotional Sustainability 2020, 12, 8518 8 of 13

experiences. Beyond these differences, athletes of all sport types reported moderate/high scores in functional psychobiosocial states and very low scores in dysfunctional states, suggesting the sport experience to be emotionally rewarding.

No significant differences were found by type of sport in all other variables, with moderate to high scores in sport-specific competence, global physical self-perception, global self-esteem, and functional psychobiosocial states, and very low scores in social physical anxiety and body dissatisfaction. Physical self-perception and global self-esteem are salient issues for young people, particularly in girls during adolescence, and play a central role as protective factors in terms of better mental health and social behavior [61]. Two different dimensions, appearance and functionality, are incorporated in the physical self-perception: appearance captures the "body as object"—what the body looks like, including body shape, size, weight, and other aspects of appearance; functionality can be seen as the "body as process", and consists of what the body can do and includes one's sport ability, skills, and global physical competence [45]. The body does not only have aesthetic features, but also instrumental or functional qualities, as it can be used as a tool "to interact with, explore and experience the world" [22] (pp. 334). To date, substantial research on the physical self has been focused on the appearance domain, especially involving girls and women, but more recently the focus has shifted to functionality, with far-reaching implications for body image in sport and exercise contexts. Thus, current research attention is not limited to individual perceptions of physical appearance—the way the body looks—but is extended to perceptions of how the body feels, moves, and functions and what the body can do. Functional qualities may also influence the overall perception people have of their bodies. Indeed, a person's sense of competence in a specific domain not only prompts positive outcomes in that domain, but may also influence competence perceptions in other domains and exert an impact on feelings, actions, and social adaptation [3]. In a study with high school girls, Greenleaf, Boyer, and Petrie [62] found sport practice to be associated with better perceptions of physical competence and more positive feelings toward the body, and to influence psychological well-being and intention to exercise also in the future. Through sporting activities, girls can increase their physical abilities and sport skills and develop a sense of body competence. They can invest in their bodies beyond aesthetics, developing a higher value for functional qualities and increasing their overall body satisfaction [63]. Organized sport is a context that facilitates mind-body integration, body awareness, and feelings of physical competence and empowerment [64]. The concept of functionality appreciation has been recently suggested within the positive body image construct to capture one's recognition for what the body can do beyond the mere awareness of body functionality; functionality appreciation has been found to be positively associated with positive body image aspects, such as body appreciation [65] and sport confidence [66].

The concepts of functionality and the appreciation of functionality could also explain the lack of differences found in our study among gender-typed sports, particularly between feminine and masculine sports. Sport practice offers athletes many opportunities to experience a positive feeling of being in control of their physical abilities and skills, and therefore to appreciate their body's functionality. Furthermore, in the sport context participants are usually members of a team or club, a specific significant social context in which similar goals are shared. Avalos and Tylka [67] found that a specific type of body acceptance from others was associated with women's emphasis on the functionality of their bodies rather than on their appearance. In agreement with Abbott and Barber's [22] study findings, the acceptance of peers may be a contributing factor to explain the positive global physical self-perception and global self-esteem observed in our study, regardless of the type of sport practiced. These functionally focused values in sport may be integrated into girls' body physical perceptions and create a blend between function and form. Even though, in some studies, female athletes have been shown to be confident in their athletic body but also to experience dissatisfaction and anxiety in other social contexts [68], the conflict between athletic body perception and social ideals does not always seem problematic [69]. Female athletes seem to compartmentalize their athletic bodies (that, in masculine sports, are often muscular) from their social bodies, and thus to distinguish between their athletic body image and their social body image. Although female athletes may recognize and fear the

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social consequences of deviating from societal standards of attractiveness, they often feel proud of their strong and functional bodies, which is beneficial for sport performance [13].

In summary, the current study findings regarding the emotional experience and physical self-perception highlight the generally positive experience of women involved in sport regardless of the type of sport. Nevertheless, given the strong social pressure on physical appearance, especially for girls, it is necessary to create an educational environment capable of challenging and counteracting social gender stereotypes. Coaches should encourage a vision that focuses less on body appearance and more on promoting facets of positive body image. The focus should be placed on personal progress and improvement in abilities and skills, with emphasis on how athletic bodies enable successful performance. Such a sport environment can foster a higher level of body confidence in girls, improve their physical capabilities and performance, and help them recognize and appreciate their body functionality. Youth sport is broadly associated with positive long-term effects for health and well-being. In the socio-cultural context, sport can also be a tool for gender equity and personal development in enhancing girls' self-empowerment and personal freedom, in promoting better social integration, and in offering opportunities for leadership and achievement [70].

Future research should address some limitations of this study. First, our data are cross-sectional and collected from participants aged from 14 to 21 years, spanning a large developmental period. Therefore, the data could not reflect developmental changes determined by personal psychological evolution from adolescence to late adolescence and also by the sporting experience itself. Future research adopting longitudinal designs, measuring these constructs in the same participants at different time points and also involving younger participants can identify potential developmental changes. Moreover, in the current study we used only psychological subjective measures. Including morphological objective measures regarding body size, such as Body Mass Index (BMI) or somatotype, could provide additional information to better understand bodily and physical self-perception [71–73]. Future research on physical self-perception and body image should also consider female and male athletes practicing other kind of sports and physical activities.

5. Conclusions

The main purpose of the study was to investigate possible differences in physical self-perception and emotional aspects in a sample of girls practicing different gender-typed sports (masculine, feminine, or neutral). Overall, sport practice was found to be a positive experience for girls regardless of the type of sport, with moderate to high values in sport-specific competence, global physical self-perception, global self-esteem, and functional psychobiosocial states, and with very low scores in social physical anxiety and body dissatisfaction. The low levels of confidence and high levels of worry observed in athletes practicing aesthetic sports could depend on the assessment system in competition, in which the final outcome is determined by the subjective evaluation of a jury.

Given the strong social pressure on the physical appearance of girls, the sport context should be an educational environment capable of challenging and counteracting social gender stereotypes. Coaches should encourage a vision focused on girls' personal progress and improvement of abilities and skills, fostering a high level of body confidence and helping athletes recognize and appreciate their body functionality.

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References

1. Côté, J.; Fraser-Thomas, J. Youth involvement and positive development in sport. In *Sport and Exercise Psychology: A Canadian Perspective*, 3rd ed.; Crocker, P.R.E., Ed.; Pearson: Upper Saddle River, NJ, USA, 2016; pp. 256–287.

- Crocker, P.R.E.; Tamminen, K.A.; Bennett, E.V. Stress, emotion and coping in youth sport. In *Sport Psychology for Young Athletes*; Knight, C.J., Harwood, C.G., Gould, D., Eds.; Routledge: New York, NY, USA, 2018; pp. 164–173.
- 3. Marsh, H.W.; Martin, A.J.; Yeung, A.S.; Craven, R.G. Competence self-perceptions. In *Handbook of Competence and Motivation: Theory and Application, 2nd ed*; Elliot, A.J., Dweck, C.S., Yeager, D.S., Eds.; The Guilford Press: New York, NY, USA, 2017; pp. 85–115.
- 4. Weiss, M.R.; Kipp, L.E.; Bolter, N.D. Training for life-Optimizing positive youth development through sport and physical activity. In *The Oxford Handbook of Sport and Performance Psychology*; Murphy, S., Ed.; Oxford University Press: New York, NY, USA, 2012; pp. 448–475.
- 5. Russell, H.C.; Dutove, J.; Dithurbide, L. Playing like a girl: Women in competition in sport and physical activity. In *The Oxford handbook of Women and Competition*; Fisher, M.L., Ed.; Oxford University Press: Oxford, UK, 2017. [CrossRef]
- 6. Istituto Nazionale di Statistica (ISTAT). La pratica sportiva in Italia—Anno 2015 [Sport practice in Italy—Year 2015]. 2017. Available online: https://www.istat.it/it/archivio/204663 (accessed on 2 July 2020).
- 7. Centro Studi e Osservatori Scientifici per lo Sport. *I Numeri dello Sport* 2017; Monitoraggio CONI–FSN–DSA 2017, [Study center and scientific observatories for sport. The numbers of sport 2017. Monitoring CONI–FSN–DSA 2017]; Coni Servizi: Rome, Italy, 2018.
- 8. Pfister, G.; Bandy, S.J. Gender and Sport. In *Routledge Handbook of the Sociology of Sport*; Giulianotti, R., Ed.; Routledge: London, UK, 2015; pp. 220–230. [CrossRef]
- 9. Chalabaev, A.; Sarrazin, P.; Fontayne, P.; Boiché, J.; Clément-Guillotin, C. The influence of sex stereotypes and gender roles on participation and performance in sport and exercise: Review and future directions. *Psychol. Sport Exerc.* **2013**, *14*, 136–144. [CrossRef]
- 10. Hardin, M.; Greer, J.D. The influence of gender-role socialization, media use and sports participation on perceptions of gender-appropriate sports. *J. Sport Behav.* **2009**, *32*, 207–226.
- 11. Koivula, N. Perceived characteristics of sports categorized as gender-neutral, feminine and masculine. *J. Sport Behav.* **2001**, *24*, 377–393.
- 12. Riemer, B.A.; Visio, M.E. Gender typing of sports: An investigation of Metheny's classification. *Res. Q. Exerc. Sport.* **2003**, 74, 193–204. [CrossRef] [PubMed]
- 13. Petrie, T.A.; Greenleaf, C. Body image and sports/athletics. In *Encyclopedia of Body Image and Human Appearance*; Cash, T.F., Ed.; Elsevier Academic Press: San Diego, CA, USA, 2012; pp. 160–165. [CrossRef]
- 14. Marsh, H.; Hattie, J. Theoretical perspectives on the structure of self-concept. In *Handbook of Self-concept: Developmental, Social, and Clinical Considerations*; Bracken, B.A., Ed.; John Wiley & Sons: New York, NY, USA, 1996; pp. 38–90.
- 15. Shavelson, R.J.; Hubner, J.J.; Stanton, G.C. Validation of construct interpretations. *Rev. Educ. Res* **1976**, *46*, 407–441. [CrossRef]
- 16. Marsh, H.W.; Richards, G.E.; Johnson, S.; Roche, L.; Tremayne, P. Physical Self-Description Questionnaire: Psychometric properties and a multitrait-multimethod analysis of relations to existing instruments. *J. Sport Exerc. Psychol.* **1994**, *16*, 270–305. [CrossRef]
- 17. Klomsten, A.T.; Skaalvik, E.; Espnes, G.A. Physical self-concept and sports: Do gender differences still exist? *Sex Roles* **2004**, *50*, 119–127. [CrossRef]
- 18. Marsh, H.W. Age and gender effects in physical self-concepts for adolescent elite athletes and nonathletes: A multicohort-multioccasion design. *J. Sport Exerc. Psychol.* **1998**, 20, 237–259. [CrossRef]
- 19. Liu, M.; Wu, L.; Ming, Q. How Does physical activity intervention improve self-esteem and self-concept in children and adolescents? Evidence from a meta-analysis. *PLoS ONE* **2015**, *10*, e0134804. [CrossRef]
- Amado-Alonso, D.; Mendo-Lázaro, S.; León-del-Barco, B.; Mirabel-Alviz, M.; Iglesias-Gallego, D. Multidimensional self-concept in elementary education: Sport practice and gender. Sustainability 2018, 10, 2805. [CrossRef]

21. Sánchez-Miguel, P.A.; Leo, F.M.; Amado Alonso, D.; Hortigüela-Alcalá, D.; Tapia-Serrano, M.A.; De La Cruz-Sánchez, E. Children's Physical Self-Concept and Body Image According to Weight Status and Physical Fitness. *Sustainability* **2020**, *12*, 782. [CrossRef]

- 22. Abbott, B.D.; Barber, B. Embodied image: Gender differences in functional and aesthetic body image among Australian adolescents. *Body Image* **2010**, *7*, 22–31. [CrossRef] [PubMed]
- 23. Cash, T.F. Body image: Past, present, and future. Body Image 2004, 1, 1–5. [CrossRef]
- 24. Varnes, J.R.; Stellefson, M.L.; Janelle, C.M.; Dorman, S.M.; Dodd, V.; Miller, M.D. A systematic review of studies comparing body image concerns among female college athletes and non-athletes, 1997–2012. *Body Image* **2013**, *10*, 421–432. [CrossRef]
- 25. Zamani Sani, S.H.; Fathirezaie, Z.; Brand, S.; Puhse, U.; Holsboer-Trachsler, E.; Gerber, M.; Talepasand, S. Physical activity and self-esteem: Testing direct and indirect relationships associated with psychological and physical mechanisms. *Neuropsychiatr. Dis. Treat.* 2016, 12, 2617–2625. [CrossRef]
- Paxton, S.J.; Neumark-Sztainer, D.; Hannan, P.J.; Eisenberg, M.E. Body dissatisfaction prospectively predicts depressive mood and low self-esteem in adolescent girls and boys. *J. Clin. Child Adolesc. Psychol.* 2006, 35, 539–549. [CrossRef]
- 27. Smolak, L.; Murnen, S.K.; Ruble, A.E. Female athletes and eating problems: A meta-analysis. *Int. J. Eat. Disord.* **2000**, *27*, 371–380. [CrossRef]
- 28. Hausenblas, H.A.; Symons Downs, D. Comparison of body image between athletes and nonathletes: A meta-analytic review. *J. Appl. Sport. Psychol.* **2001**, *13*, 323–339. [CrossRef]
- 29. Karr, T.M.; Davidson, D.; Bryant, F.B.; Balague, G.; Bohnert, A.M. Sport type and interpersonal and intrapersonal predictors of body dissatisfaction in high school female sport participants. *Body Image* **2013**, *10*, 210–219. [CrossRef]
- 30. Hart, E.A.; Leary, M.R.; Rejeski, W.J. The measurement of social physique anxiety. *J. Sport Exerc. Psychol.* **1989**, *11*, 94–104. [CrossRef]
- 31. Prapavessis, H.; Grove, J.; Eklund, R. Self-presentational issues in competition and sport. *J. Appl. Sport. Psychol.* **2004**, *16*, 19–40. [CrossRef]
- 32. Vealey, R.S. Self-confidence in athletes. In *Encyclopedia of Applied Psychology*; Spielberger, C.D., Ed.; Elsevier Academic Press: Oxford, UK, 2004; Volume 3, pp. 361–368.
- 33. Vealey, R.S.; Chase, M.A. Self-confidence in sport: Conceptual and research advances. In *Advances in Sport Psychology*, 3rd ed.; Horn, T.S., Ed.; Human Kinetics: Champaign, IL, USA, 2008; pp. 65–97.
- 34. Vealey, R.S.; Hayashi, S.W.; Giacobbi, P.; Holman, G.M. Sources of sport-confidence: Conceptualization and instrument development. *J. Sport Exerc. Psychol.* **1998**, *20*, 54–80. [CrossRef]
- 35. Martens, R.; Vealey, R.S.; Burton, D. Competitive Anxiety in Sport; Human Kinetics: Champaign, IL, USA, 1990.
- 36. Cheng, W.-N.K.; Hardy, L.; Markland, D. Toward a three-dimensional conceptualization of performance anxiety: Rationale and initial measurement development. *Psychol. Sport Exerc.* **2009**, *10*, 271–278. [CrossRef]
- 37. Hanin, Y.L. (Ed.) Emotions in Sport; Human Kinetics: Champaign, IL, USA, 2000.
- 38. Robazza, C.; Ruiz, M.C. Emotional self-regulation in sport and performance. *Oxf. Res. Encycl. Psychol.* **2018**. [CrossRef]
- 39. Ruiz, M.C.; Raglin, J.S.; Hanin, Y.L. The individual zones of optimal functioning (IZOF) model (1978–2014): Historical overview of its development and use. *Int. J. Sport Exerc. Psychol.* **2017**, *15*, 41–63. [CrossRef]
- 40. Ruiz, M.C.; Robazza, C. Emotion regulation. In *The Routledge International Encyclopedia of Sport and Exercise Psychology: Applied and Practical Measures*; Hackfort, D., Schinke, D.R.J., Eds.; Routledge: New York, NY, USA, 2020; Volume 2, pp. 263–280.
- 41. Morano, M.; Bortoli, L.; Ruiz, M.C.; Robazza, C. Psychobiosocial states as mediators of the effects of basic psychological need satisfaction on burnout symptoms in youth sport. *Int. J. Environ. Res. Public Health* **2020**, 17, 4447. [CrossRef]
- 42. Bortoli, L.; Bertollo, M.; Robazza, C. Dispositional goal orientations, motivational climate, and psychobiosocial states in youth sport. *Pers. Individ. Differ.* **2009**, 47, 18–24. [CrossRef]
- 43. Bortoli, L.; Bertollo, M.; Comani, S.; Robazza, C. Competence, achievement goals, motivational climate, and pleasant psychobiosocial states in youth sport. *J. Sports Sci.* **2011**, *29*, 171–180. [CrossRef] [PubMed]
- 44. Bortoli, L.; Messina, G.; Zorba, M.; Robazza, C. Contextual and individual influences on antisocial behaviour and psychobiosocial states of youth soccer players. *Psychol. Sport Exerc.* **2012**, *13*, 397–406. [CrossRef]

45. Sabiston, C.M.; Pila, E.; Gilchrist, J.D. Self-conscious emotions in sport and exercise. In *Handboock of Sport Psychology*; Tenenbaum, G., Eklund, R., Eds.; Wiley: Hoboken, NJ, USA, 2020; pp. 299–320.

- 46. Tenenbaum, G.; Kamata, A.; Hayashi, K. Measurement in sport and exercise psychology: A new outlook on selected issues of reliability and validity. In *Handbook of Sport Psychology*, 3rd ed.; Tenenbaum, G., Eklund, R.C., Eds.; Wiley: Hoboken, NJ, USA, 2007; pp. 757–773.
- 47. Grossbard, J.R.; Cumming, S.P.; Standage, M.; Smith, R.E.; Smoll, F.L. Social desirability and relations between goal orientations and competitive trait anxiety in young athletes. *Psychol. Sport Exerc.* **2007**, *8*, 491–505. [CrossRef]
- 48. Meleddu, M.; Scalas, L.F.; Guicciardi, M. Contributo alla validazione italiana del Physical Self-Description Questionnaire. *Bollettino di Psicologia Applicata* **2002**, 237, 36–52.
- 49. Collins, M.E. Body figure perceptions and preferences among preadolescent children. *Int. J. Eat. Disord.* **1991**, *10*, 199–208. [CrossRef]
- 50. Stunkard, A.; Sorenson, T.; Schulsinger, F. Use of the Danish adoption register for the study of obesity and thinness. In *Genetics of Neurological and Psychiatric Disorders*; Kety, S., Roland, L., Sidman, R., Matthysse, S., Eds.; Raven Press: New York, NY, USA, 1983; pp. 115–120.
- 51. Gardner, R.M.; Friedman, B.N.; Jackson, N.A. Methodological concerns when using silhouettes to measure body image. *Percept. Mot. Skills* **1998**, *86*, 387–395. [CrossRef]
- 52. Motl, R.W.; Conroy, D.E. Validity and factorial invariance of the Social Physique Anxiety Scale. *Med. Sci. Sports Exerc.* **2000**, 32, 1007–1017. [CrossRef]
- 53. Nerini, A.; Matera, C.; Di Gesto, T.; Policardo, G.L.; Stefanile, G. Validation of an Italian version of the Social Physique Anxiety Scale (SPAS) on women. In *Proceedings of The Second International Conference Healthier Societies Fostering Healthy Organizations: A Crosscultural Perspective; Florence, Italy, 30–31 August, 1 September 2018;* University of Florence: Florence, Italy, 2018. [CrossRef]
- 54. Robazza, C.; Bortoli, L.; Gramaccioni, G. L'Inventario Psicologico della Prestazione Sportiva (IPPS-48). [The Sport Performance Psychological Inventory]. *Giornale Italiano di Psicologia dello Sport* **2009**, *4*, 14–20.
- 55. Robazza, C.; Bertollo, M.; Ruiz, M.C.; Bortoli, L. Measuring psychobiosocial states in sport: Initial validation of a trait measure. *PLoS ONE* **2016**, *11*, e0167448. [CrossRef]
- 56. Ruiz, M.C.; Hanin, Y.; Robazza, C. Assessment of performance-related experiences: An individualized approach. *Sport Psychol.* **2016**, *30*, 201–218. [CrossRef]
- 57. Hair, J.F., Jr.; Black, W.C.; Babin, B.J.; Anderson, R.E. *Multivariate Data Analysis*, 8th ed.; Cengage: Hampshire, UK, 2019.
- 58. Zhu, W. Sadly, the earth is still round. *J. Sport Health Sci.* **2012**, *1*, 9–11. [CrossRef]
- 59. Cohen, J. Statistical Power Analysis for the Behavioral Sciences, 2nd ed.; Lawrence Erlbaum Associates: Mahwah, NJ, USA, 1988.
- 60. Kobiela, F. The nature of sport and its relation to the aesthetic dimension of sport. *Acta Universitatis Carolinae Kinanthropologica* **2016**, *52*, 75–84. [CrossRef]
- 61. O'Dea, J.A. Body Image and Self-Esteem. In *Encyclopedia of Body Image and Human Appearance*; Cash, T.F., Ed.; Academic Press: New York, NY, USA, 2012; pp. 141–147.
- 62. Greenleaf, C.; Boyer, E.M.; Petrie, T.A. High school sport participation and subsequent psychological well-being and physical activity: The mediating influence of body image, physical competence, and instrumentality. *Sex Roles* **2009**, *61*, 714–726. [CrossRef]
- 63. Tiggemann, M. The impact of adolescent girls' life concerns and leisure activities on body dissatisfaction, disordered eating, and self-esteem. *J. Genet. Psychol.* **2001**, *162*, 133–142. [CrossRef] [PubMed]
- 64. Daniels, E.A.; Roberts, T. Programmatic approaches to cultivating positive body image in youth. In *Body Positive: Understanding and Improving Body Image in Science and Practice*; Daniels, E.A., Gillen, M.M., Markey, C.H., Eds.; Cambridge University Press: New York, NY, USA, 2018; pp. 208–234.
- 65. Alleva, J.M.; Veldhuis, J.; Martijn, C. A pilot study investigating whether focusing on body functionality can protect women from the potential negative effects of viewing thin-ideal media images. *Body Image* **2016**, 17, 10–13. [CrossRef] [PubMed]
- 66. Soulliard, Z.A.; Kauffman, A.A.; Fitterman-Harris, H.F.; Perry, J.E.; Ross, M.J. Examining positive body image, sport confidence, flow state, and subjective performance among student athletes and non-athletes. *Body Image* **2019**, *28*, 93–100. [CrossRef] [PubMed]

67. Avalos, L.C.; Tylka, T.L. Exploring a model of intuitive eating with college women. *J. Couns. Psychol.* **2006**, 53, 486–497. [CrossRef]

- 68. Krane, V.; Stiles-Shipley, J.; Waldron, J.; Michalenok, J. Relationships among body satisfaction, social physique anxiety, and eating behaviors in female athletes and exercisers. *J. Sport Behav.* **2001**, *24*, 247–264.
- 69. Greenleaf, C. Athletic body image: Exploratory interviews with former competitive female athlete. *Women Sport Phys. Act. J.* **2002**, *11*, 63–88. [CrossRef]
- 70. Wright, J. Sexuality, gender and youth sport. In *Routledge Handbook of Youth Sport*; Green, K., Smith, A., Eds.; Routledge: New York, NY, USA, 2016; pp. 276–286. [CrossRef]
- 71. Colella, D.; Morano, M.; Robazza, C.; Bortoli, L. Body image, perceived physical ability, and motor performance in nonoverweight and overweight Italian children. *Percept. Mot. Skills* **2009**, *108*, 209–218. [CrossRef]
- 72. Morano, M.; Colella, D.; Robazza, C.; Bortoli, L.; Capranica, L. Physical self-perception and motor performance in normal-weight, overweight and obese children. *Scand. J. Med. Sci. Sports* **2011**, *21*, 465–473. [CrossRef] [PubMed]
- 73. Morano, M.; Colella, D.; Rutigliano, I.; Fiore, P.; Pettoello-Mantovani, M.; Campanozzi, A. Changes in actual and perceived physical abilities in clinically obese children: A 9-month multi-component intervention study. *PLoS ONE* **2012**, *7*, e50782. [CrossRef]

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