

Social Physique Anxiety among Bodybuilders

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ABSTRACT

The aim of the study was to determine whether there is a difference in social physique anxiety (SPA) in relation to gender, gravity of exercise, main goal of exercise and their interaction. A sample of 345 male and female gym exercisers completed social physique anxiety inventory (SPAS) and answered questions about their exercise habits. Data was collected through online survey formed on Survey Monkey which was forwarded to participants through social networks and forums related to exercise. The results of this study indicate that higher level of both SPAS dimensions (Dissatisfaction with appearance and Worry about appearance) was reported by recreational athletes (compared to more serious recreational athletes and competitive athletes) and participants whose main goal of exercise is improving health (compared to participants whose main goal of exercise is developing muscle mass or increasing endurance and strenght), while in Worry about appearance dimension, females show higher scores.

Key words: *physical appearance, dissatisfaction with appearance, worry about appearance, gym, exercise*

Introduction

Bodybuilding is a visual sport that puts emphasis on the body and its aesthetic appearance. It is aesthetic that distincts bodybuilding from other sports with weights, because competitive bodybuilders are judged on level of muscle mass development, volume, definition and muscle symmetry¹. Bolin² defines competitive muscle form as perfection sculpted through diet and exercise which cannot be maintained and competitors necessarily step away from this ideal on non-competition days which lead a very short term moment of psychological satisfaction. Although it cannot be maintained, both male and female bodybuilders evaluate their bodies compared to this ideal even when it is not competition season. They follow demanding training schedules as well as a rigorous diet routine that requires discipline and consistency without deviation. Additionally, due to the specific requirements of the sport, they are at risk of developing a social physique anxiety and eating disorders³⁻⁷.

Social physique anxiety is a component of social anxiety, which occurs when an individual examines their body or the shape of their body and is characterized by worry about other's evaluation of the individual's body⁸. This socio-psychological variable is derived from theories of

self-presentation and impressions management that reflect the perceived worry the individual associates with presenting their body in situations when they consider themselves being evaluated by others⁹.

Social physique anxiety and body dissatisfaction can be significantly highlighted in a sport environment because the conditions of training put stress on physical appearance. Namely, since the body is at the center of attention, and even clothes are designed to emphasize the visual appearance of participants, working out in such an environment leads to heightened body awareness¹⁰ and emphasized social comparison^{11,12}. However, it is interesting to note that some studies show that working out and sports are related to less fear of negative evaluation and less dissatisfaction with body image of individuals^{13,14}. On the other hand, some research also points to the relationship between working out and sports with more fear of negative evaluation, more dissatisfaction with body-image in both men and women¹⁵ and with eating disorders in women^{16,17}.

The level of social physique anxiety may vary in athletes depending on the sport they participate in. For example, women participating in sports which are considered *masculine* (require strength, use of force to move objects or aggressive contact) have a tendency of evaluat-

ing their body negatively and perceive themselves as less feminine than women which participate in feminine and socially acceptable sports¹⁸. Similarly, participating in sports that require exposing a higher percentage of the body is associated with higher levels of social physique anxiety^{10,19}. Freeman²⁰ has determined that female bodybuilders with significant muscle development are evaluated negatively; hence, the effects of lowered levels of anxiety connected to working out may also depend on body development which results from working out or is required for participation in a given sport. In other words, when their bodies start to change due to intense participation in such sports, women come into conflict with social norms and the socially prevailing body image. Additionally, women engaging in such sports are often labeled as masculine which leads to a strong sense of insecurity²¹. In general, research has shown that women experience higher levels of social physique anxiety and lower levels of body self-confidence as opposed to their male counterparts, which is consistent in all age groups^{22,23,10,13}.

Among others, athletes most commonly list imitation, earlier sports participation, self-respect and health as the main reason for getting into amateur bodybuilding²⁴. Klein²⁵ has concluded that low self-esteem related to physical appearance may be the initial motive for bodybuilding for many athletes and that there are no gender differences among bodybuilders when it comes to motivation for exercise (muscle mass, symmetry and definition). Daniels²⁶ concurred with Klein and deduced that female bodybuilders are trying to redefine femininity by discarding the image of a thin female figure. Namely, female bodybuilders reject the idea of the traditional female beauty ideal and have a much more positive body image because their perception of ideal female beauty is changed²⁷. Brownell²⁸ has pointed out that many male and female bodybuilders strive to achieve their aesthetic ideals, not only because of the expected benefit but also because of the values that they symbolize – control, discipline, competence and sexual desirability.

The results of research comparing bodybuilders with other athletes and non-athletes have been ambiguous. Some studies show that bodybuilders exhibit more dissatisfaction and unhealthier eating habits when compared to other athletes and non-athletes^{29,5}, some studies show no difference¹, while some studies show that bodybuilders have a more positive body image when compared to active^{30,14} and non-active athletes^{1,31}. Interestingly, some research shows that bodybuilders have a distorted body image³² while other research shows the opposite¹⁴.

Bodybuilding, as a visual sport, puts a lot of emphasis on the body and body evaluation – both individual and from others – because progress is measured on the individual's aesthetic characteristics. In the process of evaluating physical form, since it is a dimension of personal importance, the feeling of worry may arise about other's negatively evaluating the individual which is the basis for developing a social physique anxiety. The danger lies within potentially estimating one's value based solely on physical form, when the physical form becomes the only

source of value (as opposed to other sports where performance is key). The perceived discrepancy between the ideal and current image of the individual's body also forms the basis of the fear of being negatively evaluated and of body dissatisfaction. In competitive sports, all the listed factors are even more pronounced which makes competitors and those who care about muscle development vulnerable to developing a fear of being negatively evaluated based on appearance. However, it is possible that highly experienced bodybuilders manifest lower levels of social physique anxiety due to a more subjective probability of achieving their goal appearance. Additionally, it is possible that a more developed physical form, which comes with time and experience, leads to higher levels of body satisfaction in more experienced bodybuilders which is connected to less social physique anxiety.

When it comes to women, excluding the fact that they exhibit higher levels of fear of negative evaluation in general, it is evident that bodybuilding is a sport perceived as »masculine« and requires exposing a significant percentage of one's body which may indicate that female bodybuilders may be most vulnerable to developing a social physique anxiety.

From the above mentioned, it can be noted that female and male bodybuilders are a group potentially vulnerable of developing a social physique anxiety. Considering the inconsistency of the findings related to worry about appearance and dissatisfaction with appearance in both female and male bodybuilders, this research will be focused on the differences between competitive female and male bodybuilders, recreational athletes and serious recreational athletes in the listed dimensions. Additionally, the research will focus on testing the differences between competitors whose main goals for training are improving health, developing muscle mass and increasing endurance and strength. It is assumed that participants will exhibit different levels of the mentioned dimensions due to different motivational components of training. We expect the participants whose main goal is improving health to exhibit the lowest levels across all dimensions, while participants whose main goal is developing muscle mass to exhibit the highest levels.

Materials and Methods

Participants

The research included 345 participants, mostly male (67%). The average age of participants was $M = 27.3$ years ($SD = 6.46$; range 15–52 years). The Table 1 shows the distribution of participants across socio-demographic and other characteristics.

Most participants have a college or community college degree and are mostly employed. When it comes to working out, most participants have been frequenting a gym for more than 24 months, mostly 4 to 7 hours per week, predominantly working out individually without or with a professional program. The main goal of exercising for most participants is developing muscle mass. Most par-

TABLE 1
DISTRIBUTION OF PARTICIPANTS ACROSS SOCIO-DEMOGRAPHIC AND OTHER CHARACTERISTICS (N=345)

		<i>f</i>	%
Gender	Male	231	67.0
	Female	114	33.0
Highest level of education	Elementary school	1	0.3
	High School	131	38.0
	Community College and College	178	51.6
	Master's Degree and Doctorate	35	10.1
Work Activity	Unemployed	41	11.9
	Student	118	34.2
	Employed	185	53.6
	Retired	1	0.3
Time length of exercise in gym	Up to 6 months	30	8.7
	From 6 to 12 months	25	7.2
	From 12 to 24 months	39	11.3
	More than 24 months	251	72.8
Type of workout in gym	Individual training in a gym not according to a professional program	150	43.5
	Individual training in a gym according to a professional program	164	47.5
	Training in a gym with a personal trainer	31	9.0
Main goal of exercise	Reducing weight	40	11.6
	Improving health	48	13.9
	Developing muscle mass	150	43.5
	Meeting new people/socializing/fun	2	0.6
	Increasing endurance and/or strength	105	30.4
Frequency of workout	Up to 4 hours per week	52	15.1
	4 to 7 hours per week	159	46.1
	More than 7 hours per week	134	38.8
Degree of gravity of exercise	Recreational athlete	88	25.5
	Serious recreational athlete	193	55.9
	Competitive athlete	64	18.6
Self-assessed physical preparedness	Extremely below average	4	1.2
	Below average	11	3.2
	Average	99	28.7
	Above average	194	56.2
	Extremely above average	37	10.7

participants rate their workout as serious recreation and consider themselves in above average physical condition (Table 1).

When it comes to the main goal of working out, it is necessary to note that the categories reducing weight and improving health have been merged into a single category named working out with the main purpose of improving health due to a low number of participants in each category. Also, the category meeting new people/socializing/fun has been excluded from further analysis due to a very low number of participants ($N = 2$).

Instruments

Basic demographic data and data about workout habits have been collected.

Social Physique Anxiety Scale (SPAS)⁸ is a scale for measuring worry related to beliefs that the one is being negatively evaluated by others based on appearance. SPAS is a self-assessment questionnaire in which participants respond to 12 statements using a Likert-type scale with 5 degrees (1 = Not at all characteristic of me, 5 = Extremely characteristic of me). Because statements are both in positive and negative direction, total score is calculated as a sum of negatively worded statements and reverse scoring of positively worded statements. Higher score indicates higher social physique anxiety.

Research has proven the satisfactory validity and reliability of the SPAS questionnaire⁸. However, in this research SPAS has shown unsatisfactory reliability in internal consistency ($\alpha = .42$), which is why a factor analysis of

TABLE 2
FACTOR LOADINGS FOR EXPLORATORY FACTOR ANALYSIS WITH OBLIMIN ROTATION OF SPA SCALE

Scale items	Component	
	1	2
It would make me uncomfortable to know others were evaluating my physique or figure.	.809	-.373
Unattractive features of my physique or figure make me nervous in certain social settings.	.801	-.419
In the presence of others, I feel apprehensive about my physique or figure.	.776	-.533
When in a bathing suit, I often feel nervous about how well proportioned my body is.	.764	-.529
When it comes to displaying my physique or figure to others, I am a shy person.	.749	-.508
There are times when I am bothered by thoughts that other people are evaluating my weight or muscular development negatively.	.709	-.240
I wish I wasn't so up-tight about my physique or figure.	.680	-.191
I usually feel relaxed when it's obvious that others are looking at my physique or figure.	-.584	.515
I am comfortable with the appearance of my physique or figure.	-.457	.867
When I look in the mirror I feel good about my physique or figure.	-.460	.848
I am comfortable with how fit my body appears to others.	-.285	.774
I would never worry about wearing clothes that might make me look too thin or overweight.	-.283	.318

Note. Component 1 = *Worry about appearance*; Component 2 = *Dissatisfaction with appearance*.

the questionnaire was conducted including an oblimin rotation due to the high intercorrelation of items. The results point to the existence of two factors which explain the 56.42% variance in manifest variables, i.e. worry about appearance ($\lambda = 5.45$) and dissatisfaction with appearance ($\lambda = 1.32$) (Table 2). The subscale for dissatisfaction with appearance has three items and measures the degree with which a person is dissatisfied with the form and shape of their body (e.g. »I am comfortable with how fit my body appears to others.«), while the subscale for worry about appearance has seven items and measured concern with how others evaluate the individual's body shape and form (e.g. »When in a bathing suit, I often feel nervous about how well proportioned my body is.«). Two items of the SPAS questionnaire have been excluded from further analysis due to very low saturation on both main components (»I would never worry about wearing clothes that might make me look too thin or overweight.«) and due to cross-loadings (»I usually feel relaxed when it's obvious that others are looking at my physique or figure.«). The Cronbach alpha reliability coefficients has shown satisfactory reliability on both dimensions, i.e. $\alpha = .88$ for worry about appearance and $\alpha = .80$ for dissatisfaction with appearance.

Procedure

For the purposes of this research, an online questionnaire was made on Survey Monkey which was forwarded to participants with a note of voluntary and anonymous participation in the research. The questionnaire was distributed via social networks and forums related to working out in gyms where recreational athletes and competitive bodybuilders share experience and knowledge among each other (eg. Forum Teretana, FC XXL, FC JUMP).

Results

The descriptive data show that participants exhibit low to moderate levels of dissatisfaction with appearance ($M = 7.6$; $SD = 2.68$) and low to moderate levels of worry about appearance ($M = 16.6$; $SD = 6.90$).

Multivariate normality was verified using a Mardia test which showed a statistically significant deviation from the multivariate normal distribution ($b1p = 0.53$, $p < .001$; $b2p = 7.79$, $p = .63$). The Kolmogorov-Smirnov test showed that the distribution on variables dissatisfaction with appearance ($z = 0.13$; $p < .001$) and worry about appearance ($z = 0.11$; $p < .001$) deviated from normal distribution and producing a positively asymmetrical distribution. Although both variables showed asymmetrical distribution, our results show that the coefficient of skewness for all groups is mostly under .5 and does not surpass $+/- 1$. This demonstrated that these are only slightly skewed distributions and that no other more extreme deviations in asymmetry exist³³.

Two two-way MANOVA analyses have been conducted, one for goal of exercise and one for gravity of exercise, in order to determine the differences in the level of the dimensions of social physique anxiety (dissatisfaction with appearance and worry about appearance) with regard to gender, gravity of exercise and goal of exercise and their respective interaction.

The necessary prerequisite of normality of distribution in order to conduct a parametric statistical analysis is considered achieved due to the lack of any extreme deviation in kurtosis and symmetry of distribution and due to the robustness of the univariate F -test in case of disrupted normality³⁴. However, our results point to the unequal

TABLE 3
DIFFERENCES IN PRONUNCIATION OF THE DIMENSIONS OF SOCIAL PHYSIQUE ANXIETY (DISSATISFACTION WITH APPEARANCE AND WORRY ABOUT APPEARANCE) IN REGARD TO GENDER AND GRAVITY OF EXERCISE (N=345)

SPAS dimension	Gender	Gravity of exercise	N	M	SD	<i>F</i>	
						Gender	Gravity
Dissatisfaction with appearance	M	Recreational athlete	49	9.0	2.10	0.49	14.30**
		Serious recreational athlete	133	7.3	2.59		
		Competitive athlete	49	6.3	2.29		
	F	Recreational athlete	39	8.8	2.76		
		Serious recreational athlete	60	7.5	2.84		
		Competitive athlete	15	7.1	2.81		
Worry about appearance	M	Recreational athlete	49	16.2	5.87	18.93**	7.26*
		Serious recreational athlete	133	15.2	6.16		
		Competitive athlete	49	13.9	5.11		
	F	Recreational athlete	39	22.1	7.81		
		Serious recreational athlete	60	18.8	7.62		
		Competitive athlete	15	15.7	6.63		

Note. ** $p < .001$; * $p < .01$.

number of participants in each category. The stated may, especially due to the disrupted condition for normality of distribution, effect the results of the research (increased probability of Type 1 error, i.e. α), which warrants heightened caution when interpreting results. However, it is important to note that studies have shown that ANOVA is not particularly sensitive to mild deviations in normality³⁵. The disrupted assumption of normality should not have a significant effect on our research results, i.e. on Type 1 errors.

Results have shown the statistically significant gender differences in the level of social physique anxiety ($\Lambda = .94$, $F(2,338) = 11.14$, $p < .001$, partial $\eta_p^2 = .06$) and gravity of exercise ($\Lambda = .92$, $F(4,676) = 7.62$, $p < .001$, partial $\eta_p^2 = .04$). However, Gender x Gravity of exercise interaction was not statistically significant ($\Lambda = .97$, $F(4,676) = 2.22$, $p = .07$, partial $\eta_p^2 = .01$).

The two-way ANOVA (Table 3) showed no gender differences in dissatisfaction with appearance ($p = .49$, partial $\eta_p^2 = .00$). When it comes to gravity of exercise, a statistically significant difference has been established in dissatisfaction with appearance ($p < .001$, partial $\eta_p^2 = .08$). A post-hoc Scheffe test showed that recreational athletes scoring higher in the dimension of dissatisfaction with appearance in contrast to serious recreational athletes ($p < .001$) and competitive athletes ($p < .001$), while serious recreational athletes and competitive athletes do not differ statistically in a significant way ($p = .08$).

A significant gender difference ($p < .001$, partial $\eta_p^2 = .05$) was determined in the dimension worry about appearance with women scoring higher than men. When it comes to gravity of exercise, statistically significant differences have been determined ($p = .001$, partial $\eta_p^2 = .04$). A further analysis of the post-hoc Scheffe test has determined that in the dimension of worry about appearance, recreational athletes score higher than serious recrea-

tional athletes ($p = .01$) and competitive athletes ($p < .001$) while serious recreational athletes and competitive athletes do not differ statistically in a significant way ($p = .09$) (Table 3).

The second two-way MANOVA was conducted in order to determine the differences in the level of the dimensions of social physique anxiety (dissatisfaction with appearance and worry about appearance) in regard to gender, main goal of exercise and their interaction. The results confirm the statistically significant gender differences in the level of the social physique anxiety ($\Lambda = .91$, $F(2,336) = 17.17$, $p < .001$, $\eta_p^2 = .09$) and main goal of exercise ($\Lambda = .95$, $F(4,672) = 4.03$, $p = .003$, $\eta_p^2 = .02$). However, the interaction effect is statistically non-significant ($\Lambda = .99$, $F(4,672) = 1.12$, $p = .35$, $\eta_p^2 = .01$) (Table 4).

When it comes to dissatisfaction with appearance (Table 4), no statistically significant gender differences were determined ($p = .82$, $\eta_p^2 = .00$). For the main goal of exercise, a statistically significant difference was determined in dissatisfaction with appearance ($p = .007$, $\eta_p^2 = .03$). The post-hoc Scheffe test indicates that participants whose main goal is to improve health score higher in the dimension dissatisfaction with appearance than participants whose main goal is developing muscle mass ($p = .01$) or increasing endurance and strength ($p = .02$), while participants whose main goal is developing muscle mass and participants whose main goal is increasing endurance and strength do not differ significantly ($p = .96$).

In the dimension worry about appearance (Table 4) a statistically significant gender difference has been determined ($p < .001$, $\eta_p^2 = .07$), with women scoring higher than men do. When it comes to main goal of exercise, a statistically significant difference was also determined ($p = .02$, $\eta_p^2 = .02$). A further post-hoc Scheffe test analysis indicates that in the dimension worry about appearance participants whose main goal is to improve health score

TABLE 4
DIFFERENCES IN PRONUNCIATION OF THE DIMENSIONS OF SOCIAL PHYSIQUE ANXIETY (DISSATISFACTION WITH APPEARANCE AND WORRY ABOUT APPEARANCE) IN REGARD TO GENDER AND GOAL OF EXERCISE (N=345)

SPAS dimension	Gender	Goal of exercise	N	M	SD	<i>F</i>	<i>F</i>
						Gender	Goal
Dissatisfaction with appearance	M	Health	34	7.9	2.90	0.05	5.00**
		Muscle mass	119	7.3	2.49		
		Endurance and strength	77	7.4	2.58		
	F	Health	54	8.7	3.02		
		Muscle mass	31	7.1	2.26		
		Endurance and strength	28	7.0	2.82		
Worry about appearance	M	Health	34	14.9	6.30	25.78***	3.84*
		Muscle mass	119	16.0	5.73		
		Endurance and strength	77	14.0	5.94		
	F	Health	54	21.4	8.18		
		Muscle mass	31	18.9	6.87		
		Endurance and strength	28	16.9	7.35		

Note. *** $p < .001$; ** $p < .01$; * $p < .05$.

higher than participants whose main goal is developing muscle mass ($p = .031$) or increasing endurance and strength ($p < .001$), while participants whose main goal is developing muscle mass and participants whose main goal is increasing endurance and strength do not differ significantly ($p = .10$).

Discussion and conclusions

The aim of the research was to determine whether there was a difference in the level of the social physique anxiety in regard to gender, gravity of exercise and main goal of exercise.

The results show that recreational athletes (as opposed to serious recreational athletes and competitive athletes) and those whose main goal is health (as opposed to those whose main goal is muscle mass or endurance and strength) display higher levels of social physique anxiety (more dissatisfaction with appearance and more worry about appearance). Woman also score higher when it comes to worry about appearance. These results are in accordance with expectations to an extent. On the one hand, it is expected that competitive athletes will display more social physique anxiety since that is a dimension that is personally significant to them as competitors in a sport in which all value and competition results stem from appearance^{11,12}.

On the other hand, research shows that highly experienced athletes may be less socially anxious when compared to beginners^{30,19} because of the more subjective probability of attaining their desired appearance³⁶. They invest more effort into working out and controlling their diet that

is reflected in physical results. Therefore, they display, as our research has shown, less dissatisfaction with their appearance. Also, research has determined elevated body awareness and pronounced social comparison related to the conditions of working out in a gym which highlights and exposes the body^{10,37} which is related to higher levels social physique anxiety. This may lead to higher levels of social physique anxiety because the comparison of recreational athletes and competitive athletes harms recreational athletes that are constantly exposed to »better bodies« than their own.

In the case of comparing participants primarily focused on health as opposed to those oriented towards muscle mass and those oriented towards endurance and strength, the results did not match expectations. Namely, it was expected that participants oriented towards muscle mass would display more fear of being negatively evaluated because of the focus on their own body, appearance and form as opposed to participants focused on health³⁸. However, this research has shown the opposite. Based on these results we may posit the question – how truly healthy is it to exercise solely to improve health if it leads to more fear of being negatively evaluated? On the other hand, the very nature of the answer to the question of why participants work out in a gym needs to be considered. Namely, the answers are self-assessed by participants and it is impossible to claim with certainty that participants that have listed health as their primary goal are actually exercising with that goal in mind. It is possible that some participants have listed health, as it is difficult for them to admit that their primary goal is in fact appearance. Additionally, it is possible that these results are the outcome of merging categories of reducing weight and improv-

ing health. It is possible that the participants from the initial reducing weight category are clouding part of the results. This question warrants further research in which the categories of reducing weight and improving health are separated in order to achieve clearer results.

Finally, the results which point to higher levels of worry about appearance in women is in line with expectations and earlier research^{22,23,39,10,13}. However, contrary to what was expected, the results have not determined an interaction between gender and gravity of exercise in a way that would point to female competitors worrying more about appearance^{18,10}. Since women show more social physique anxiety in general, it was expected that the conditions of a masculine sport in which more attention is paid to body and physique would lead to female competitive bodybuilders exhibiting even higher levels of social physique anxiety. Additionally, woman did not display higher levels of dissatisfaction with their appearance, which also is not in line with expectations¹⁵. It is possible that the lack of difference between men and women in dissatisfaction with appearance is because men and women are dissatisfied with different aspects of their appearance. Women strive for thinness, while men strive for muscularity^{40, 15}. The construct of dissatisfaction with appearance does not differentiate between different aspects of appearance, which might explain why men and women do not score differently when it comes to dissatisfaction with appearance. Further research may be focused on correcting this limitation. Moreover, it is possible that these results are the product of the fact that the men and women in this research are athletes, which may have diminished expected gender differences.

It is interesting to note that serious recreational athletes and competitive athletes do not differ in social physique anxiety. It is not entirely clear what has caused these results. Both groups go through a very similar and demanding process of attaining a top level of physical form. The only difference is that athletes participating in competitions have criteria that are more stringent and receive more public acknowledgement through placing high in competitions. No matter the similarity of the process of getting in shape, it was expected that a difference between these two groups would arise from the higher criteria competitive athletes are exposed to and the personal and public pressure that stems from competing. However, the results seem to show that it is beginning a rigorous process of exercise that is crucial and not entering a competition.

A similar situation occurred between participants whose main goal was developing muscle mass and those whose main goal was increasing strength and endurance.

Despite having different motivational components, the groups did not significantly differ. It is possible that the method of self-assessment was lacking in this case as well, i.e. that part of the participants were in denial about their main goal and were in fact primarily working out to develop muscle mass and not increase strength and endurance. Further research may be focused on more precisely determining the primary motivation for working out in a gym.

When it comes to the implications of the research, it is possible to conclude that when it comes to the social physique anxiety, individuals exercising for serious recreation or competitions are less vulnerable than those exercising for recreational purposes only are. We can also conclude that is more favorable, in regard to social physique anxiety, to exercise in order to develop muscle mass and increase strength and endurance that just for health. Additionally, it makes no difference for the individual if they exercise as a serious recreational athlete or competitive athlete, nor does it make a difference if their primary goal is developing muscle mass or increasing strength and endurance. This information may be useful when compiling an exercise program. Other than that, sports psychologists and trainers should take into consideration the higher vulnerability of women to problems related to the social physique anxiety.

It is necessary to note the limitations regarding the SPAS questionnaire's unexpectedly low reliability, because of which two dimensions were formed (dissatisfaction with appearance and worry about appearance). That led to a significantly lower number of items that measured a given construct, which is a deviation from the methodology of previous research. Namely, previous research used the SPAS questionnaire as a unidimensional construct and even though there are studies which used two dimensions^{1,41} that is not analogous to this research in which two items were omitted in addition to splitting the questionnaire into two dimensions. Moreover, limitations may arise from the convenient sampling procedure. Specifically, the sample was voluntary, convenient and self-selected to the bodybuilders who were drawn to the topic of research, and this lowers the representativeness of the findings. We cannot know whether the participants entered the research because they have more or less social physique anxiety when compared to others and whether that was what drew them to it.

In addition to the listed suggestions, further research may be focused on exploring the same constructs in subcategories of bodybuilding, i.e. different competition categories that require different levels of physical fitness.

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STRAH OD NEGATIVNE EVALUACIJE IZGLEDA KOD BODYBUILDERA

SAŽETAK

Cilj istraživanja bio je utvrditi postoji li razlika u izraženosti straha od negativne evaluacije izgleda s obzirom na spol, ozbiljnost i cilj vježbanja te njihovu interakciju. Uzorak se sastoji od 345 muških i ženskih sudionika koji vježbaju u teretani te koji su ispunili mjere straha od negativne evaluacije izgleda (SPAS). Podaci su prikupljeni pomoću online upitnika izrađenog na „Survey Monkey“ koji je prosljeđen sudionicima preko društvenih mreža i foruma povezanih s vježbanjem u teretani. Rezultati istraživanja pokazuju da viši strah od negativne evaluacije izgleda u obje dimenzije (Nezadovoljstvo izgledom i Briga oko izgleda) pokazuju rekreativci (naspram ozbiljnih rekreativaca i natjecatelja) i sudionici kojima je glavni cilj vježbanja zdravlje (naspram sudionika kojima je glavni cilj mišićna masa i izdržljivost i snaga), dok u dimenziji Brige oko izgleda više rezultate pokazuju žene.