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The Effects of the Media on College Age Men: A Study of Muscle Dysmorphic Disorder

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THE EFFECTS OF THE MEDIA ON COLLEGE AGE MEN: A STUDY OF MUSCLE DYSMORPHIC DISORDER

A Capstone Experience Thesis

Presented in Partial Fulfillment of the Requirements for

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Honors College Graduate Distinction at Western Kentucky University

By

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ABSTRACT

This study inspected the influence of the media on Muscle Dysmorphia. The participants in this study were 41 male college students recruited from Western Kentucky University's Study Board. The participants completed demographics and then took the Muscle Dysmorphia Questionnaire and the Body Assessment Scale, viewed a film clip and then completed the aforementioned surveys again with rearranged questions. Results indicate that there is a significant time effect between the pre-test and post-test for both the Muscle Dysmorphia Questionnaire and the Body Assessment Scale, and a significant interaction between video and per-post-test Muscle Dysmorphic Questionnaire results. The findings suggest that films cause an increase in Muscle Dysmorphia symptoms, and a decrease in body satisfaction.

Keywords: Capstone Experience Thesis, Psychology, Eating Disorders, Muscle Dysmorphia

Dedicated to my lovely wife, my family, and all
who have helped me along this long and winding road

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Oral Presentations

Menser, S.A., Savage, D., Waddell, A. D., and Hamahan, M. (2011, April) When fat is entertainment: Examining the effects of obesity in the media on bodily satisfaction as compared to the symptoms of Muscle Dysmorphia. Presentation at the Annual Convention of the Middle Tennessee Psychological Association, Murpheesboro, TN.

Morris, B., Cyr, C., Armstrong, M. B., Van Ryckenghem, R., Waddell, A. D., Savage, D., Isbell, A., Shacklette, M., Lillpop, C., West, H., & White, M. (2012, March). *Superstitious fan behavior.* Paper presented at the 42nd Annual Western Kentucky University Sigma Xi Student Research Conference, Bowling Green, KY.

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FIELD OF STUDY

Major Field: Psychology

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CHAPTER 1

THE EFFECTS OF THE MEDIA ON COLLEGE AGE MEN: A STUDY OF MUSCLE DYSMORPHIC DISORDER

Historically, when one mentioned an eating disorder, disorders such as bulimia nervosa, anorexia nervosa, and binge eating disorder come to mind. Most often these disorders are associated with women. For many years, it was thought that men were free from the influences of society to have a specific body shape (Crandall, 1994). However, recent literature has pointed to an increase in the pressure for men to have a muscular body (Pope, Olivardia, Boroweicke, & Cohane, 2001), and it has been found that exposure to stereotypically attractive people can cause a decrease in a persons' bodily satisfaction (Groesz, Levine, & Murnen, 2002). Current research has shown that up to 95% of college age males are dissatisfied with one at least part of their body, and that men are now experiencing levels of body dissatisfaction similar to women (Murry, Rieger, Touyz, & Garcia, 2010; Grieve, Wann, Henson, & Ford, 2006). Furthermore, studies of body satisfaction have shown that exposure to images of muscular men results in a lowering of body satisfaction for men, and that viewing an average man did not cause any change in body satisfaction (Baird & Grieve, 2006). The results of these studies have shown that the decrease in body satisfaction has led men to develop a different type of eating disorder known as Muscle Dysmorphia. As reported by Frederick et al. (2007), muscle dysmorphia symptoms are present in many countries, and could be

considered a growing problem worldwide.

Muscular Dysmorphia (MD) is characterized by men who have a distorted body image, and is a subset of Body Dysmorphic Disorder (BDD) which is characterized by an individual worrying excessively about "an imagined defect in appearance" (APA, 2000). It was originally named "reverse anorexia nervosa" or "big-orexia" because of the fear experienced by men with the disorder of being too small or having too much body fat (Pope, Phillips, & Olivardia, 2000; Pope Gruber, Choi, Olivardia, & Phillips, 1997). The characteristics of the distorted body image for MD are that a person believes that they are small and weak when in reality they are not, believes that they need to be muscular with a low body fat percentage, they skip scheduled events to work out, and they spend more than five hours a day thinking that they are not muscular enough (Olivardia, 2001).

Classification of MD within the *Diagnostic and Statistical Manual of Mental Disorders* is an ongoing debate. Research has suggested that MD should be classified as an obsessive compulsive spectrum disorder within the classification of a body dysmorphic disorder, instead of an eating disorder because, one does not have to adhere to a strict diet to meet the diagnostic criteria of MD (Chandler, Derryberry, Grieve, & Pegg, 2009; Hildebrandt, Schlundt, Langenbucher, & Chung, 2006; Maida & Armstrong, 2005). Studies have shown that there is a strong positive relationship between MD and obsessive-compulsive symptoms, and that there is no relationship between MD and somatoform disorders (Maida, & Armstrong, 2005;
Chandler et al., 2009).

Four different identified categories can contribute to the development of muscle dysmorphia; they include socioenviromental, physiological, emotional, and psychological factors. According to Grieve (2007), the socioenviromental category includes participation in sports, and the media. Other research has shown that the pressure on men to be muscular has increased because of devices such as muscular athletes (Baum, 2006), *Playgirl* magazine (Leit, Pope, & Gray, 2001), the Chippendales restaurant, and toy action figures (Pope, Olivardia, Gruber, & Borowiecki, 1999).

Previous research by Hubbard and Grieve (2000) found that when men viewed a clip of extremely muscular men their symptoms of MD increased. Hubbard and Grieve hypothesized that this was because the men felt that their image was threatened by the extremely muscular men. In Hubbard and Grieve's research clips of a NASCAR race and Professional wrestling were used. The NASCAR race was the non-muscular condition for this experiment and included crashes to keep the excitement level on par with the experimental clip. The muscular condition clip was of a WWE RAW match and included highly muscular men. This experiment included 20 men from a mid-south university. Their mean reported age was 23.55 years and included three freshmen (15%), two juniors (10%), six seniors (30%), and six others (30%). The study by Hubbard and Grieve showed that there was not a significant interaction between mood and time (pre-test v. post-test), body satisfaction and condition across time, negative mood and time, muscular television and MD across time. The study also showed that there was a significant interaction between drive for muscularity and time $F(1,18) = 5.225$, $p = .035$, $\eta^2 = .225$. This interaction occurred after viewing the muscular clip and resulted in a decrease in the

drive for muscularity. The present study will again test the effects of movie clips on the symptoms of MD by using film clips of different genres than Hubbard and Grieve's study. The main hypothesis is that viewing film clips of muscular actors will increase the symptoms of MD and cause a decrease in body satisfaction.

CHAPTER 2

METHODS

Participants

The participants were 41 Western Kentucky University male students who read informed consent documents at the beginning of the experiment. The students were recruited from the Western Kentucky University Department of Psychology Study Board and were awarded credit in their respective classes for participation. The participants consisted of 22 college freshmen (54%), 11 college sophomores (27%), three college juniors (7%), two college seniors (5%), two graduate students (5%), and one who did not report his education level (2%). Racial composition was 30 Caucasian (81%), 4 African American (10%), 1 Middle Eastern (2%), 1 Asian or Pacific Islander (2%), and 2 unreported (5%). All participants were over 18 years of age. The mean reported age was 20.53 years (*SD* = 3.17).

Design

This study is a 2 (Time: pre-test v. post test) x 2 (Movie: muscular actor v. average actor) between subjects design. The independent variables are time, and the body physique of the actors in the clip viewed, either the "Rambo" clip or the "National Treasure" clip. The dependent variables are the scores on the Muscle Dysmorphia Questionnaire and Body Assessment Scale.

Measures

Demographics. A demographic questionnaire was administered to collect data on the participants' age, race, and level of education. See Appendix A.

Manipulation Check. This was a short questionnaire that was used to make sure the participant viewed the film clip. See Appendix B.

Muscle Dysmorphia. The Muscle Dysmorphia Questionnaire is a 34-item questionnaire (MDQ; (Grieve, Short, Cubberly, Derryberry, Jones & Wilson, n.d.) that measures symptoms of Muscle Dysmorphia, including how people feel about their amount of muscle mass and how they feel about working out. Participants respond using a scale from 1 to 6, with 1 indicating *strongly disagree* and 6 indicating *strongly agree*. An example question from the MDQ is "I am inclined to work out even when I am sick." Higher scores are associated with higher levels of Muscule Dysmorphia. Short (2006) reported that Cronbach's Alpha for the MDQ is .87, which gives this questionnaire a high level of internal consistency. See Appendix C.

Body Satisfaction. The Body Assessment Scale was also be used (BAS; Lorenzen et al., 2004). The BAS contains 25 items that pertain to body appearance (for example muscularity, facial appearance, weight, and calves). The items are rated on a five-point Likert-type scale ranging from 1 indicating *strongly negative* to 5 indicating *strongly positive.* The scale is then scored by obtaining the mean score of the 25 items, and a higher score indicates higher body satisfaction. Lorenzen, Grieve, & Thomas (2004) reported that Chronbach's alpha for the BAS is .95, which gives the scale a high level of internal consistency. See Appendix D.

Movies

Muscular Actor. The movie for the muscular condition group was "Rambo: First Blood Part II" (Feitshans & Cosmatos, 1985) The scenes that were shown from this film were chapters 25 through 29. These chapters lasted 12 minutes and 15 seconds. This clip showed Rambo running through the jungle, shirtless, killing enemy soldiers. The clip showed several people being killed, but did not show any blood. However, the clip showed several enemy soldiers getting burnt to death and one soldier being hit by an explosive arrow and being blown to pieces. The clip also displayed Sylvester Stallone's (Rambo's) highly muscular body in many different instances.

Normal Actor. The movie clip for the normal condition group was from "National Treasure" (Bruckheimer & Turteltaub, 2004). This clip only featured chapter 15, which is 11 minutes and 9 seconds long. This chapter showed the bad guys forcing the good guys to go down a crumbling staircase that collapses under them, resulting in one of the bad guys falling down a bottomless pit and the other characters almost falling. The good guys are also forced at gunpoint to reveal a clue about where they need to go next. The scene started off slow and then became very intense and contained action levels similar to those displayed in the muscular condition.

Procedures

The participants first read the informed consent document. If they did not want to continue with the experiment they were free to leave at this point, but if they continued with the experiment, it meant they agreed with the terms of the study. Then, the participants answered a short series of questions about their demographics, and took the

MDQ and the BAS for the first time. The participants were then randomly assigned to either the muscular actor condition or the normal actor condition. After this, the participants were shown the movie clip for their respective condition. The participants then completed a short questionnaire on the film they watched. After this, the participants took a rearranged MDQ and BAS, after which they received a short debriefing. After the debriefing, the subjects were free to leave. Each session took about 25 minutes to complete.

CHAPTER 3

RESULTS

Preliminary Analysis

Chronbach's alpha for the pre-test Muscle Dysmorphia Questionnaire was .90, the post-test MDQ resulted in a Chronbach's alpha of .87. The pre-test Chronbach's alpha for the Body Assessment Scale (BAS) was .90 and the post-test Chronbach's alpha was for the Body Assessment Scale was .95. The manipulation check was used to discard participants data if two or more questions were missed. Only two sets of participant data were discarded because of the manipulation check. Scores were calculated for the MDQ by summing the participants answers. The participants answers on the BAS were averaged to provide the score. The mean, standard deviation, maximum score, and minimum score for each measure are summarized in the following table. The mean was calculated using summed totals for each of the respected measures.

Table 3.1: Mean and Standard Deviation for Tests

	Mean	Standard Deviation	Maximum Total Score	Minimum Total Score
Pre-test Muscle Dysmorphia Questionnaire Rambo	87.61	20.69	121	57
Pre-test Muscle Dysmorphia Questionnaire National Treasure	94.66	24.42	147	55
Post-test Muscle Dysmorphia Questionnaire Rambo	84.66	21.13	126	49
Post-test Muscle Dysmorphia Questionnaire National Treasure	81.80	19.43	124	47
Pre-test Body Assessment Scale Rambo	91.82	16.90	122	67
Pre-test Body Assessment Scale National Treasure	80.89	14.37	120	55
Post-test Body Assessment Scale Rambo	89.18	18.26	117	52
Post-test Body Assessment Scale National Treasure	77.41	16.70	119	61

Table 3.1 Mean and Standard Deviation for Test

A repeated measures ANOVA (analysis of variance) with a Greenhouse-Geisser correction indicated that differences in MDQ results differed significantly between the pre-test and post-test $F(1,39) = 29.602$, $p = .000$, $\eta^2 = .43$. A post-hoc test using the Boferroni correction showed that the factor of time resulted in a statistically significant difference ($p < .001$) between MD symptoms presented on the pre-test and post-test (91.137 ± 5.913 vs. 83.184 ± 5.913), but no statistical difference between which film clip was viewed.

A repeated measures ANOVA with a greenhouse-Geisser correction indicated that BAS results differed significantly between the pre-test and post-test $F(1,39) = 7.312$, $p = .01$, $\eta^2 = .16$. A post hoc test using the Boferroni correction showed that the factor of time resulted in a statistically significant decrease ($p = .01$) between results on the BAS between the pre-test and post-test (86.353 ± 4.572 vs. 83.297 ± 4.572). A post hoc test using the Boferroni correction showed that the factor of video also resulted in a statistically significant difference ($p = .032$) between results on the BDQ after viewing either the "National Treasure" clip or the "Rambo" clip (79.15 ± 20.653 vs. 90.5 ±20.653).

CHAPTER 4

DISCUSSION

The purpose of this experiment was to determine the effect, if any, of watching movie clips of muscular actors had on Muscle Dysmorphia symptomology and body satisfaction. The results indicate that there is a negative relationship between viewing movies with male main characters (muscular and non-muscular) and Muscle Dysmorpia symptomology and body satisfaction. This is an interesting result that does not support the hypothesis under study that a movie with a muscular male character would increase the displayed symptoms of Muscle Dysmorphia. It did, however, support the hypothesis that a movie with a muscular actor will decrease body satisfaction, but because the non-muscular condition also caused a decrease in body satisfaction, more research needs to be done on the subject.

There was a significant main effect for muscle dysmorphia symptoms, which echoes the findings of Hubbard and Grieve (2000). Their study also showed a decrease in Muscle Dysmorphia symptoms after viewing film clips, though their clips were of pro athlete sports. The unexpected effect on Muscle Dysmorphia symptoms could be because movies with highly muscular characters make a person realize that being highly muscular is not that attractive, or it could let them realize how muscular they currently are. Another possible cause is that a movie with a normally muscled character could let a

person realize that one does not have to be heavily muscled to achieve in life.

There was also a significant main effect for body satisfaction between both conditions. While this shows that films portraying highly muscled characters causes a decrease in mens' bodily satisfaction, the same could also be true of films where the main character is an average size male. Prior research by Baird and Grieve (2006) and Lorenzen, Grieve, and Thomas (2004) also shows that body satisfaction can be decreased when men are exposed to muscular male models. More research can be done to rule out the possibility that the appearance of the men and not their muscularity are the cause for the decrease in bodily satisfaction.

Another possibility for the decrease in MD symptomology is that after viewing the film clips the participants were in a better mood. This more positive mood state could have resulted in the participants feeling more positively about their body physique, which would result in a decrease in MD symptomology. There was anecdotal evidence that participants had fun watching the clips, especially the "Rambo" clip, which would also have resulted in an increase in positive mood state. Another possibility is that because both main characters were playing the role of "hero" this might have caused the participants to associate them with a "heroic" body type.

Limitations

There were limitations to this study. First, was the limitation on the population for the present study, which consisted only of male college-age students from a mid-south university. This limitation results in a decrease in the ability to generalize the results to the population due to the limited age, location, and sex of the sample. A second

limitation was that there were only two film clips involved in this experiment. This limitation also results in a decrease in the ability to generalize the results to all movies and types of media.

Conclusion

In conclusion the results of this experiment indicates that what you watch can influence how you feel about yourself, and that media may provide a resource in the treatment of MD. Media can be used to help treat MD by exposing patients to clips of movies that are similar to ones used in this experiment, which would hopefully result in a decrease of MD symptoms. However, this experiment only showed a decrease in MD symptoms when the subjects were male, college age, and from a mid-south university, and these results cannot be generalized. The experiment would have to be conducted across many locations, age groups, and both sexes before the results could be generalized across the entire population. Further research could also test other movies and possible television shows. The current experiment only shows that clips from National Treasure, and Rambo: First Blood Part II result in a decrease in MD symptoms. Other types of media or entire movies could show the same effect or an opposite effect on the subjects.

APPENDIX A

DEMOGRAPHICS

Please respond to the following questions.

Age (in years) - _____

Race/Ethnicity - _____

What is your current level of education? (please circle)

College Freshman

College Sophmore

College Junior

College Senior

Graduate Studies

APPENDIX B

MANIPULATIONCHECK

National Treasure

1. What was the coolest part of this film to you.

2. What is the main bad guy's name?

   A. Ian

   B. George

   C. Dave

   D. Regan

3. How many shots are fired during this clip

   A. 0

   B. 1

   C. 2

   D. 3

Rambo

1. What was the coolest thing that Rambo did in this film?

2. What continent do you think Rambo is on?

A. Africa

B. Antarctica

C. Asia

D. Mexico

3. How many people did you think Rambo killed?

A. 1-10

B. 20-30

C. 60-70

D. 70-100

APPENDIX C

MUSCLE DYSMORPHIA QUESTIONNAIRE

Original

Instructions: Please respond to each of the following statements. Circle the response choice that best describes you.

	Strongly Disagree	Somewhat Disagree	Slightly Disagree	Slightly Agree	Somewhat Agree	Strongly Agree
When I see my reflection in the mirror or a window, I feel badly about my body size or shape	1	2	3	4	5	6
Working out causes problems in my job	1	2	3	4	5	6
I eat specific foods at specific times throughout the day in order to gain muscle mass	1	2	3	4	5	6
When I see muscular men, it makes me feel badly about my body shape or size	1	2	3	4	5	6
I am inclined to continue to work out when I am sick	1	2	3	4	5	6
I am ashamed of my body shape or size	1	2	3	4	5	6
I have difficulty maintaining relationships because of thoughts about my body	1	2	3	4	5	6
I am inclined to continue to work out when I am injured	1	2	3	4	5	6
I have difficulty maintaining relationships because of thoughts of working out	1	2	3	4	5	6
I believe bad things happen in my life when I do not have a specific level of muscularity	1	2	3	4	5	6

	Strongly Disagree	Somewhat Disagree	Slightly Disagree	Slightly Agree	Somewhat Agree	Strongly Agree
Working out causes problems in my romantic relationships	1	2	3	4	5	6
I believe I am more muscular than others	1	2	3	4	5	6
I feel badly when I do not get to work out	1	2	3	4	5	6
I eat by myself	1	2	3	4	5	6
I am inclined to continue to work out against doctor's orders	1	2	3	4	5	6
I am inclined to participate in activities that require wearing swimsuits	1	2	3	4	5	6
I do not believe I am as muscular as others	1	2	3	4	5	6
I want to be more muscular than I currently am	1	2	3	4	5	6
I think I look better when I have large muscles	1	2	3	4	5	6
Working out causes problems in my friendships	1	2	3	4	5	6
I am muscular enough	1	2	3	4	5	6
If I could increase my muscle mass, I would	1	2	3	4	5	6
I have difficulty focusing on schoolwork because of thoughts about my body	1	2	3	4	5	6
I am not muscular enough	1	2	3	4	5	6
Others feel that I am way too focused on my body shape or size	1	2	3	4	5	6
I have difficulty focusing on schoolwork because of thoughts of working out	1	2	3	4	5	6
I feel insecure about my body	1	2	3	4	5	6
I use legal or illegal supplements (creatine or anabolic steroids) to help develop my muscles	1	2	3	4	5	6

	Strongly Disagree	Somewhat Disagree	Slightly Disagree	Slightly Agree	Somewhat Agree	Strongly Agree
I am inclined to participate in activities that require minimal clothing	1	2	3	4	5	6
The less clothing I wear, the more anxious I become	1	2	3	4	5	6
I eat a large amount of protein in order to increase my muscularity	1	2	3	4	5	6
I feel anxious when I deviate from my diet	1	2	3	4	5	6
I believe bad things happen to me when I do not keep my workout schedule	1	2	3	4	5	6
I feel anxious when I miss a workout	1	2	3	4	5	6

Reordered

Instructions: Please respond to each of the following statements. Circle the response choice that best describes you.

	Strongly Disagree	Somewhat Disagree	Slightly Disagree	Slightly Agree	Somewhat Agree	Strongly Agree
When I see muscular men, it makes me feel badly about my body shape or size	1	2	3	4	5	6
Working out causes problems in my job	1	2	3	4	5	6
I am inclined to continue to work out against doctor's orders	1	2	3	4	5	6
When I see my reflection in the mirror or a window, I feel badly about my body size or shape	1	2	3	4	5	6
I am inclined to continue to work out when I am sick	1	2	3	4	5	6
I have difficulty maintaining relationships because of thoughts about my body	1	2	3	4	5	6
I am ashamed of my body shape or size	1	2	3	4	5	6
I am inclined to participate in activities that require minimal clothing	1	2	3	4	5	6

	Strongly Disagree	Somewhat Disagree	Slightly Disagree	Slightly Agree	Somewhat Agree	Strongly Agree
I have difficulty maintaining relationships because of thoughts of working out	1	2	3	4	5	6
I believe bad things happen in my life when I do not have a specific level of muscularity	1	2	3	4	5	6
Working out causes problems in my romantic relationships	1	2	3	4	5	6
I eat by myself	1	2	3	4	5	6
I feel badly when I do not get to work out	1	2	3	4	5	6
I believe I am more muscular than others	1	2	3	4	5	6
I eat specific foods at specific times throughout the day in order to gain muscle mass	1	2	3	4	5	6
I use legal or illegal supplements (creatine or anabolic steroids) to help develop my muscles	1	2	3	4	5	6
I do not believe I am as muscular as others	1	2	3	4	5	6
I think I look better when I have large muscles	1	2	3	4	5	6
Working out causes problems in my friendships	1	2	3	4	5	6
I am muscular enough	1	2	3	4	5	6
If I could increase my muscle mass, I would	1	2	3	4	5	6
I have difficulty focusing on schoolwork because of thoughts about my body	1	2	3	4	5	6
I am not muscular enough	1	2	3	4	5	6
Others feel that I am way too focused on my body shape or size	1	2	3	4	5	6
I have difficulty focusing on schoolwork because of thoughts of working out	1	2	3	4	5	6
I feel insecure about my body	1	2	3	4	5	6

	Strongly Disagree	Somewhat Disagree	Slightly Disagree	Slightly Agree	Somewhat Agree	Strongly Agree
I am inclined to participate in activities that require wearing swimsuits	1	2	3	4	5	6
I am inclined to continue to work out when I am injured	1	2	3	4	5	6
The less clothing I wear, the more anxious I become	1	2	3	4	5	6
I want to be more muscular than I currently am	1	2	3	4	5	6
I feel anxious when I deviate from my diet	1	2	3	4	5	6
I believe bad things happen to me when I do not keep my workout schedule	1	2	3	4	5	6
I feel anxious when I miss a workout	1	2	3	4	5	6
I eat a large amount of protein in order to increase my muscularity	1	2	3	4	5	6

APPENDIX D

BODY ASSESSMENT SCALE

Original

The following are some areas in which people tend to be concerned about their bodies. Please circle the number that corresponds to how positive or negative you feel about each of the areas.

1. **Weight**	1	2	3	4	5		14. **Chest**	1	2	3	4	5		
	strongly negative		neutral		strongly positive			strongly negative		neutral		strongly positive		
2. **Face**	1	2	3	4	5		15. **Chin**	1	2	3	4	5		
(appearance)	strongly negative		neutral		strongly positive			strongly negative		neutral		strongly positive		
3. **Body Shape**	1	2	3	4	5		16. **Energy**	1	2	3	4	5		
	strongly negative		neutral		strongly positive		**Level**	strongly negative		neutral		strongly positive		
4. **Thighs**	1	2	3	4	5		17. **Body Build**	1	2	3	4	5		
	strongly negative		neutral		strongly positive			strongly negative		neutral		strongly positive		

5. **Upper Body Strength**	1 strongly negative	2	3 neutral	4	5 strongly positive			18. **Physical Coordination**	1 strongly negative	2	3 neutral	4	5 strongly positive		
6. **Waist**	1 strongly negative	2	3 neutral	4	5 strongly positive			19. **Buttocks**	1 strongly negative	2	3 neutral	4	5 strongly positive		
7. **Reflexes**	1 strongly negative	2	3 neutral	4	5 strongly positive			20. **Calves**	1 strongly negative	2	3 neutral	4	5 strongly positive		
8. **Health**	1 strongly negative	2	3 neutral	4	5 strongly positive			21**. Stomach**	1 strongly negative	2	3 neutral	4	5 strongly positive		
9. **Shoulders**	1 strongly negative	2	3 neutral	4	5 strongly positive			22. **Physical Condition**	1 strongly negative	2	3 neutral	4	5 strongly positive		
10. **Physical Stamina**	1 strongly negative	2	3 neutral	4	5 strongly positive			23. **Triceps**	1 strongly negative	2	3 neutral	4	5 strongly positive		
11. **Agility**	1 strongly negative	2	3 neutral	4	5 strongly positive			24. **Abdominal Muscles**	1 strongly negative	2	3 neutral	4	5 strongly positive		

12. **Biceps** 1 2 3 4 5
strongly neutral strongly
negative positive

13. **Lower Body Strength** 1 2 3 4 5
strongly neutral strongly
negative positive

25. **Legs** 1 2 3 4 5
strongly neutral strongly
negative positive

Reordered

The following are some areas in which people tend to be concerned about their bodies. Please circle the number that corresponds to how positive or negative you feel about each of the areas.

1. **Energy Level** 1 2 3 4 5
strongly neutral strongly
negative positive

2. **Face (appearance)** 1 2 3 4 5
strongly neutral strongly
negative positive

3. **Body Shape** 1 2 3 4 5
strongly neutral strongly
negative positive

4. **Chin** 1 2 3 4 5
strongly neutral strongly
negative positive

14. **Waist** 1 2 3 4 5
strongly neutral strongly
negative positive

15. **Thighs** 1 2 3 4 5
strongly neutral strongly
negative positive

16. **Weight** 1 2 3 4 5
strongly neutral strongly
negative positive

17. **Body Build** 1 2 3 4 5
strongly neutral strongly
negative positive

5. **Upper Body Strength**	1 strongly negative	2	3 neutral	4	5 strongly positive	18. **Physical Coordination**	1 strongly negative	2	3 neutral	4	5 strongly positive
6. **Chest**	1 strongly negative	2	3 neutral	4	5 strongly positive	19. **Reflexes**	1 strongly negative	2	3 neutral	4	5 strongly positive
7. **Buttocks**	1 strongly negative	2	3 neutral	4	5 strongly positive	20. **Calves**	1 strongly negative	2	3 neutral	4	5 strongly positive
8. **Stomach**	1 strongly negative	2	3 neutral	4	5 strongly positive	21**. Health**	1 strongly negative	2	3 neutral	4	5 strongly positive
9. **Legs**	1 strongly negative	2	3 neutral	4	5 strongly positive	22. **Physical Condition**	1 strongly negative	2	3 neutral	4	5 strongly positive
10. **Physical Stamina**	1 strongly negative	2	3 neutral	4	5 strongly positive	23. **Agility**	1 strongly negative	2	3 neutral	4	5 strongly positive
11. **Triceps**	1 strongly negative	2	3 neutral	4	5 strongly positive	24. **Abdominal Muscles**	1 strongly negative	2	3 neutral	4	5 strongly positive

12. **Shoulders** 1 2 3 4 5

strongly neutral strongly

negative positive

25. **Biceps** 1 2 3 4 5

strongly neutral strongly

negative positive

13. **Lower Body Strength** 1 2 3 4 5

strongly neutral strongly

negative positive

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