

## MUAY THAI EXERCISE'S IMPACT ON BODY SATISFACTION AND SELF-ESTEEM IN WOMEN

Muhammad Agung Asmawi \*, Rahadi Arie Hartoko, Andi Tihardimanto, Ariyanto Arief,  
Rahmi Damis

Program Studi Pendidikan Dokter, Fakultas Kedokteran dan Ilmu Kesehatan,  
Universitas Islam Negeri Alauddin Makassar  
Kampus I UIN Alauddin, Jl. Sultan Alauddin No.63 Makassar, Indonesia  
Corresponden Email: [muhagungasmawi@gmail.com](mailto:muhagungasmawi@gmail.com)

### Abstract

With the increasing popularity of Muaythai martial arts in improving physical fitness, understanding the impact this type of sport has on mental health is imperative. In most countries around the world, women are the gender most at risk of experiencing low levels of Bodysatisfaction and self esteem. Objectives: This study focused on the relationship of Muaythai training with Bodysatisfaction and Self-Esteem in adult women. Methods: This study used a cross-sectional approach and was conducted on 43 adult women who were determined through the total sampling method. This study was conducted in January 2024 - February 2024 at Bintang Muaythai Camp Makassar. Data analysis was performed univariately and bivariately using Spearman's rank correlation test. Results: The correlation between variables was analyzed using Spearman's rank correlation test and there was no significant relationship between Muaythai training and Bodysatisfaction in adult women (p-value; 0.716), and there was no relationship between Muaythai training and Self-Esteem in adult women (p-value; 0.340).

**Keywords:** Muaythai Training, Physical Activity, Bodysatisfaction, Self-Esteem, Adult Women

### Introduction

Muay Thai, or "the art of eight limbs", is a martial arts sport originating from Thailand. Its popularity is increasing around the world, including Indonesia.<sup>1,2</sup> This is due to its many benefits, such as improved physical fitness, strength, endurance, and muscle agility.<sup>3</sup> Muay Thai falls into the category of high-intensity interval training, where increased physical activity not only has a positive impact on physical health, but also mental health.<sup>4,5</sup>

Psychological well-being and mental health can be significantly affected by various elements of Muay Thai as a physical martial arts activity. One aspect that can be looked at in assessing mental health is *body satisfaction*, which is influenced by a variety of factors, including social media use, where users are predominantly female.<sup>6,7</sup>

*Body satisfaction* can also be influenced by levels of physical activity, so adopting a sedentary lifestyle can cause a person to lose the ability to develop self-acceptance and decrease perceptions of their own body.<sup>8</sup>

Decreased self-esteem can affect one's behavior in carrying out daily activities. Similar to body shape satisfaction, high self-esteem is closely related to physical activity.<sup>7,8</sup> Increased physical activity has been shown to have a positive impact on improving body shape satisfaction and self-esteem, both in physically fit individuals and those with chronic diseases.<sup>9</sup>

## Method

This study was a *cross-sectional* study. This study was conducted on 43 women determined through the total sampling method and carried out in January-February 2024 at Bintang Muaythai Camp Makassar. The criteria in this study were women who met the inclusion and exclusion criteria. Sample women who are classified as adults (19-30 years).

Data were analyzed using univariate and bivariate tests, then *Spearman's rank* correlation test. This study has obtained ethical approval from the Health Research Ethics Committee of the State Islamic University of Alauddin Makassar with number: E.040/KEPK/FKIK/I/2024. Data analysis involves tracing a single characteristic of a variable without considering its association with other variables, known as univariate analysis. Categorical data is presented in the form of counts and percentages. On the other hand, bivariate analysis was performed to examine the relationship between independent and dependent variables using Spearman's rank statistical test. The relationship between variables was considered significant if the p-value was less than 0.05.<sup>10</sup>

## Results

**Table 1. Distribution of Basic Characteristics of the Study Sample**

Characteristics	Frequency (Person)	Percentage (%)
<b>Mother's age</b>	33	77%
19-24 Years	10	23%
25-30 Years		
<b>Education</b>	26	8,9%
Student	15	35%
Self-employed	2	5%
ASN		
<b>Total</b>	43	100%

Based on Table 1, in the age category of respondents, 33 (77%) respondents were 19-24 years old, and 10 (23%) respondents were 25-30 years old. In the employment category, as many as 26 (60%) respondents were female students, as many as 15 (35%) respondents worked as self-employed, and as many as 2 (5%) respondents worked as ASN.

**Table 2. Distribution of Research Variables**

Research Variables	Frequency (person)	Presentasse (%)
<b>Muay Thai Training</b>		
Mild (Less than 480 MET-minutes/week)	3	7%
Moderate (480 MET-minutes/week)	23	53%
Heavy (at least 1500 MET-minutes/week)	17	40%
<b>Bodysatisfaction</b>		
No problem with body shape (score $X \leq 60$ )	8	19%
Mild concern for body shape (score $60 \leq X < 85$ )	16	37%
Moderate concern for body shape (score $85 \leq X \leq 111$ )	18	42%
Very concerned about body shape (score $111 \leq X$ )	1	2%
<b>Self-Esteem</b>		
Low (0-15)	0	0%
Normal (15-25)	10	23%

High (25-30)	33	77%
--------------	----	-----

Based on Table 2, it can be seen from the 43 respondents studied that the duration of muaythai training for respondents in the light category (<480 MET-minutes/week) was (0) people (0%), the medium duration category (480-1499 MET-minutes/week) was (23) people (53%), and the heavy duration category (>1500 MET-minutes/week) was (17) people (40%).

The dependent variable in this study is bodysatisfaction. Based on the distribution of research variables, it can be seen that of the 43 respondents studied, respondents with the category of feeling no problem with the shape (X score < 60) amounted to (8) people (19%), respondents with mild concern for body shape (score 60 < X < 85) as many as (16) people (37%), respondents with moderate concern for body shape (score 85 < X < 111) as many as (18) people (42%), and the category is very concerned about body shape (score 111 < X) as many as (1) people (2%).

Another dependent variable in this research is self-Esteem. Based on Table 2, it can be seen from the 43 respondents studied, the level of Self-Esteem of respondents in the low category (0-15) was (0) people (0%), the normal category (15-25) was (10) people (23%), and the high category (25-30) as many as 33 people (77%).

**Table 3. Relationship between Muaythai Exercise and *Bodysatisfaction* in Adult Women**

Body Satisfaction	Muaythai								p-value
	Low		Medium		High		Total		
	n	%	n	%	n	%	n	%	
Don't care	1	2%	4	9%	3	7%	8	19%	0.716
Mild concern	0	0%	9	21%	7	16%	16	37%	
Moderate care	1	2%	10	23%	7	16%	18	42%	
Heavy care	1	2%	0	0%	0	0%	1	2%	
Total	3	7%	23	53%	17	40%	43	100%	

Based on the relationship between muaythai training and bodysatisfaction, a correlation coefficient of 0.057 is obtained, meaning that the level of strength of the relationship between the muaythai activity variable and bodysatisfaction is 0.057 or a very weak relationship. The correlation coefficient value above is positive, which is 0.057 so that the relationship between the two variables is unidirectional (unidirectional type of relationship), thus it can be interpreted that the more muaythai activity is increased, the bodysatisfaction will also increase if there is an increase of one unit in variable x and other variables are assumed to be zero, then y will increase by 0.057. It is known that the significance value (sig) is 0.716, because the sig value.  $0.716 < \text{greater than } 0.05 \text{ or } 0.01$ , there is no significant relationship between muaythai activity and bodysatisfaction.

**Table 4. Relationship of Muaythai Exercise with *Self-esteem* in Adult Women**

Self-esteem	Muaythai								p-value
	Low		Medium		High		Total		
	n	%	n	%	n	%	n	%	
High	3	7%	14	33%	16	37%	33	33%	0.34
Normal	0	0%	9	21%	1	2%	10	23%	
Low	0	0%	0	0%	0	0%	0	0%	
Total	3	7%	23	53%	17	40%	43	100%	

Based on Table 4., obtained a correlation coefficient of 0.149, meaning that the level of strength of the relationship between the *muaythai* activity variable and *self-esteem* is 0.149 or a very weak relationship. The obtained correlation coefficient number above has a positive value, namely 0.149 so that the relationship between the two variables is unidirectional (unidirectional type of relationship), thus it can be interpreted that the more *muaythai* activity is increased, the *self-esteem* will also increase. It is known that the significance value (sig) is 0.340, because the sig value. 0.340 > greater than 0.05 or 0.01, meaning there is no significant relationship between *muaythai* activity and *self-esteem*.

## Discussion

Muaythai or thai boxing is a very popular sport and one of the export products of Thai culture, and has made a huge impact on the world of martial arts and commercial sports. Muaythai when compared to other types of martial arts is very different because it involves almost all limbs as contact points (hands, elbows, knees, and feet), and includes fighting techniques such as punches, elbows, knee strikes, kicks, and grappling.

Unlike other martial arts sports such as boxing which only uses 2 points of contact (fists) and taekwondo which only uses 4 points of contact (fists and feet). There are also other studies that suggest Muaythai has a high involvement in aerobic metabolism and anaerobic glycolysis which makes Muaythai included in the category of high interval training physical activity.<sup>13,14</sup> Although muaythai or physical activities such as martial arts sports are generally dominated by men, not a few women are also interested in deepening it, there are various reasons why women are interested in training to leave their hometowns to Thailand for reasons such as improving self-defense skills, maintaining physical fitness and increasing mental strength.<sup>11</sup>

Based on the results of descriptive analysis, it was found that the majority of women had a level of muaythai training with moderate intensity with a total of 23 people or 53%, with the most age range of 19-24 years with the majority being at the level of bodysatisfaction in the category of moderate concern for body shape totaling 18 or 42% and a high level of self-esteem category totaling 33 or 77%.

Based on the results of data processing using the Spearman's rank test obtained a correlation coefficient of 0.57, so that the relationship between muaythai activity and bodysatisfaction is unidirectional (unidirectional type of relationship) with a very weak level of relationship strength with a significance value (sig) of 0.716, meaning that there is no significant relationship between muaythai activity and bodysatisfaction. The results of this study in line with research entitled physical activity and body image of women: literature review, finding that women experience body dissatisfaction and higher body image concerns more often than men. The study also mentioned that although physical activity has a positive relationship with body image, only respondents who are in the control group who do activities with diet have a significant relationship because physical activity cannot change body image.<sup>12</sup> This is in line with the research that has been done where bodysatisfaction does not have a significant relationship with physical activity in this case muaythai. There are various factors that influence a person's low level of bodysatisfaction such as mass media, where the perception of a person's ideal body changes with the presence of mass media, mass media also one of the strong factors in influencing interpersonal relationships of both men and women in paying attention to their bodies so that it leads to a person's low level of bodysatisfaction.<sup>13</sup>

Neumark-Sztainer et al., (2006) said that other factors that can affect a person's level of Bodysatisfaction are, individual psychological and cognitive factors, personal psycho for girls is very vulnerable to being influenced by desires and ideals, so girls choose traits based on a priority scale towards traits that have a higher chance of achieving an image that is considered ideal, this tendency

becomes a problem because individuals begin to make social comparisons in the form of comparing personal bodies with other people's bodies.<sup>14</sup>

The next factor is biological and physical factors, where a person can experience dissatisfaction with their body image because it has been distorted by cultural norms and one's environment. The culture in which a person lives, affects how a person thinks, for example in mass media such as television, social media, movies, and books can influence its users, especially in the media exposure to images of certain body type perceptions can change body perceptions, such as the type of body shape that is considered good and preferred by society, this can reduce a person's bodysatisfaction quickly.

While based on the results of data processing using the Spearman's rank test, the relationship between muaythai activity and self-esteem is unidirectional (unidirectional type of relationship) with a correlation coefficient of 0.57 or at the level of very weak relationship strength, thus it can be interpreted that the more muaythai activity is increased, the self-esteem will also increase, although these results are in accordance with the research of Ichraf et al., (2013) effect of gender and type of sport on anxiety and self-esteem where individual sports athletes have characteristics of high self-esteem and low anxiety levels. However, based on the results of the Spearman's rank test, it is known that the significance value (sig) obtained is 0.716, meaning that there is no significant relationship between muaythai activity and self-esteem, this result is in accordance with the research effects of early sport participation on self-esteem and happiness where self-esteem and body satisfaction of respondents who participate in sports, higher when compared to those who do not participate. This is due to various factors such as sedentary behavior caused by a lot of free time, and age factors.<sup>15</sup>

Research by Wagnsson et al, (2014) also suggested that self-esteem fluctuates during adolescence and is at its highest level in late adolescence and is more influenced by perceived sports competence, they also found that the level of perceived sports competence in adolescence and adulthood plays an important role in a person's self-esteem level, as long as the level of perceived sports competence is positive.<sup>16</sup>

Based on research by Hagen et al., (2020) depression is one of the factors for someone experiencing low self-esteem, the relationship between these two variables is influenced by perseverative thinking such as brooding. Rumination is one of the body's strategies when facing negative things such as past mistakes, self-deficiencies, and pessimistic feelings about future, so excessive self-critical rumination can affect self-esteem levels and at low levels can make a person vulnerable to problems such as social anxiety, eating disorders, and drug use.<sup>17</sup>

## **Conclusion**

Based on the results of research and analysis with Spearman's Rank test, it is concluded that there is a very weak relationship and no significance between Muaythai training with Bodysatisfaction and Self-esteem in adult women. For future research, it is recommended to involve additional variables such as diet in analyzing the relationship of Muaythai training with the level of bodysatisfaction and self-esteem in women. Further research can also expand geographical coverage by involving all training camps that have been registered and certified as members of PB. Muaythai Indonesia in Makassar City and have to obtain a more comprehensive picture. In addition, considering qualitative aspects of the research, such as in-depth interviews, may provide a deeper understanding of the factors that influence bodysatisfaction and self-esteem in women.

## References

- [1] Phuykaeokam S, Deebhijarn S. Influences on the Muay Thai tourism industry in Thailand. *J Tour Serv*. 2020;9(1):1–10.
- [2] Abdul H, Naufal IK. Aim for world championships: Ariotedjo to Muay Thai athletes. 2023.
- [3] Saraiva BTC, Scarabottolo CC, Christofaro DGD, Silva GCR, Junior IFF, Vanderlei LCM, et al. Effects of 16 Weeks of Muay Thai Training on the Body Composition of Overweight/Obese Adolescents. *Ido Mov Cult J Martial Arts Anthropol*. 2021;21(3):35–44.
- [4] Noonan RJ. Pengaruh Partisipasi Olahraga Remaja Terhadap Massa Tubuh Pelacakan Indeks dan Hubungan antara Indeks Massa Tubuh dan Harga Diri selama Periode Tiga Tahun. 2022;4–13.
- [5] Saengsawang N. Effect of Muay-Thai Functional Training Program on Physical Fitness and Muay-Thai Skills: A Pilot Study. *J Rehabil Ther Dev Divers*. 2023;6(2):388–94.
- [6] Helwig NE, Hong S, Hsiao-wecksler ET. *Body Image: Understanding body dissatisfaction in men, women and children*. 3rd ed. Routledge; 2017.
- [7] Jarman HK, Marques MD, McLean SA, Slater A, Paxton SJ. Social media, body satisfaction and well-being among adolescents: A mediation model of appearance-ideal internalization and comparison. *Body Image*. 2021;36:139–48.
- [8] Fischetti F, Latino F, Cataldi S, Greco G. Gender differences in body image dissatisfaction: The role of physical education and sport. *J Hum Sport Exerc*. 2020;15(2):241–50.
- [9] Homan KJ, Tylka TL. Appearance-based exercise motivation moderates the relationship between exercise frequency and positive body image. *Body Image* [Internet]. 2014;11(2):101–8. Available from: <http://dx.doi.org/10.1016/j.bodyim.2014.01.003>
- [10] Perez G, Infectious BMC, Perez LG, Allavena C, Sécher S, Durand S, et al. Sport and self-esteem in people living with HIV: a cross-sectional study. *BMC Infect Dis* [Internet]. 2022;22–5. Available from: <https://doi.org/10.1186/s12879-022-07860-y>
- [11] Crisafulli A, Vitelli S, Cappai I, Milia R, Tocco F, Melis F, et al. Physiological responses and energy cost during a simulation of a Muay Thai boxing match. *J Sports Sci*. 2009;150:143–50.
- [12] Davies SG, Deckert A. Muay Thai: Women, fighting, femininity. *Int Rev Sociol Sport*. 2020;55(3):327–43.
- [13] MOSUR-KALUZA S, GUSZKOWSKA M. Physical activity and body image of women: literature review. *Balt J Heal Phys Act*. 2015;7(3):29–37.
- [14] Neumark-Sztainer D, Levine M, Paxton S, Smolak L, Piran N, Wertheim E. Prevention of body dissatisfaction and disordered eating: What next? *Eat Disord*. 2006;14(4):265–85.
- [15] Ichraf A, Ali BM, Khaled T, Liwa M, Ali E. Effect of gender and type of sport on anxiety and self-esteem. *Int J Humanit Soc Sci Invent* [Internet]. 2013;2(3):55–61. Available from: [www.ijhssi.org](http://www.ijhssi.org)
- [16] Wagnsson S, Lindwall M, Gustafsson H. Participation in organized sport and self-esteem across adolescence: The mediating role of perceived sport competence. *J Sport Exerc Psychol*. 2014;36(6):584–94.
- [17] Hagen R, Havnen A, Hjemdal O, Kennair LEO, Ryum T, Solem S. Protective and Vulnerability Factors in Self-Esteem: The Role of Metacognitions, Brooding, and Resilience. *Front Psychol*. 2020;11:1–7.