Original Article
ISSN (Online): 2582-7472

ShodhKosh: Journal of Visual and Performing Arts
January-June 2024 5(1), 2178–2183

A STUDY ON SOMATOTYPE-BASED DIFFERENCES IN BODY IMAGE AWARENESS AMONG COLLEGE STUDENTS

Naganna M. S. [1], Dr. R. Ramakrishnan [2]

[1] Research Scholar, Department of Physical Education and Sports Sciences, Hindustan Institute of Technology and Science, Padur, Chennai, Tamil Nadu, India
[2] Assistant Professor (SG), Department of Physical Education and Sports Sciences, Hindustan Institute of Technology and Science, Padur, Chennai, Tamil Nadu, India

DOI
10.29121/shodhkosh.v5.i1.2024.5132

Funding: This research received no specific grant from any funding agency in the public, commercial, or not-for-profit sectors.

ABSTRACT

This study explores somatotype-based differences in body image awareness among 18–23-year-old Mesomorphs, Ectomorphs, and Endomorphs from Mysore University-affiliated colleges in Karnataka, India. Stratified sampling chose 150 male college students to test body image awareness using the Body Self-Image Questionnaire (Short Form). The three somatotype groups had significantly different body image awareness scores. Endomorphs had the most body image awareness, followed by Ectomorphs and Mesomorphs. After descriptive data, Mesomorphs had the lowest mean body image ratings (85.52) and Endomorphs the highest (98.98). A one-way ANOVA showed significant differences across groups ($F = 111.31$, $p < 0.001$). Tukey's HSD test post-hoc analysis showed significant pairwise differences, with Endomorphs scoring higher than Ectomorphs and Mesomorphs and Mesomorphs scoring lower than Ectomorphs. These findings imply that societal and cultural body type beliefs affect body image awareness as well as physical appearance. The findings emphasize the need of somatotype-specific body image therapies for young adults' body satisfaction and mental health.

Keywords: Somatotype, Body Image Awareness, Mesomorph, Ectomorph, Endomorph, College Students, Body Self-Image Questionnaire

1. INTRODUCTION

According to Cash & Smolak (2011), body image awareness—an individual's perception, thoughts, and feelings regarding their physical appearance—is vital to psychological well-being, especially in young people. Social comparison, group pressure, and media-driven beauty ideals make college students vulnerable (Grabe et al., 2008). Negative body image is associated to low self-esteem, depression, and disordered eating (Eisenberg et al., 2011), making it important in clinical and developmental psychology. Sheldon (1940)'s somatotype classification system, which divides humans into three body types: endomorph (fatter and rounder), mesomorph (muscular and athletic), and ectomorph (lean and slender), is an understudied factor in body image. Endomorphic people may be more dissatisfied with their bodies owing to weight stigma (Puhl & Heuer, 2009) because society favours mesomorphic and ectomorphic body types (Petrie et al., 1996). However, empirical studies on somatotype-based body image awareness in college students are scarce, requiring further research.

College pressures like academics, social changes, and independence may worsen body image issues (Lipson & Sonneville, 2017). Women have historically been more dissatisfied with their bodies than men (Fredrickson & Roberts, 1997). Recent research reveal that male students are increasingly concerned with their body image, notably muscularity and leanness (Murray et al., 2017). These findings suggest a deeper grasp of how somatotype and gender affect body image awareness. While previous research has examined body dissatisfaction, few have examined whether certain somatotypes are disproportionately connected with negative self-perception, which could inform targeted therapies.

Somatotype-based body image awareness disparities in college students are examined in this study to fill these gaps. The research intends to: (a) evaluate body image perception among endomorphic, mesomorphic, and ectomorphic individuals; and (b) investigate if societal prejudices against certain body types increase dissatisfaction.

This study will add to the corpus of literature on young adult body image and mental health. Somatotype-specific body dissatisfaction trends may inform university counseling services, public health campaigns, and student-specific body-positive programs. These results may also inspire additional study of body diversity across cultures and institutions.

2. METHODOLOGY

2.1. PARTICIPANTS

The study would include 150 male college students ages 18–23 from Mysore University colleges in Karnataka, India. The sample size ensures statistical validity and representation for group comparisons.

2.2. SAMPLING TECHNIQUE

Stratified sample will ensure fair representation from three somatotype groupings. Body types will divide participants into three groups: Group I includes Mesomorphs, who are muscular and athletic; Group II includes Ectomorphs, who are slim and slender; and Group III includes Endomorphs, who are rounder and softer. Anatometric examinations utilizing the Heath-Carter Somatotype Method will classify somatotypes.

2.3. INCLUSION AND EXCLUSION CRITERIA

Informed permission is required from male 18–23-year-olds in Mysore University-affiliated colleges. To maintain study validity, those with physical limitations, chronic medical illnesses, or body image therapy or counseling will be omitted.

2.4. VARIABLES OF THE STUDY

The independent variable in this study is somatotype, which includes Mesomorph, Ectomorph, and Endomorph. Participants' responses on a validated psychological scale reflect body image awareness. Comparing body image impressions across body kinds is possible with this setup.

Test Tool: Body Self-Image Questionnaire – Short Form (BSIQ-SF)

The study will use the 27-statement Body Self-Image Questionnaire – Short Form (BSIQ-SF) to examine body image awareness. The statements are divided into nine subscales: Overall Appearance Evaluation (OAE), Health/Fitness Influence (HFI), Investment in Ideals (II), Health/Fitness Evaluation (HFE), Social Dependence (SD), Height Dissatisfaction (HD), Fatness Evaluation (FE), Negative Affect (NA), and Appearance Grooming Each subscale measures body image perception, and participants rate each statement from "Never True" to "Always True." The questionnaire assesses body image perception, feeling, and investment in multiple dimensions.

2.5. PROCEDURE

To identify participants by somatotype, anthropometric measurements were taken. To ensure accuracy and honesty, participants completed the Body Self-Image Questionnaire – Short Form under supervision after classification. All data were kept confidential and used solely for research purposes.

3. DATA ANALYSIS

The body image scores for each somatotype group will be summarized using mean and standard deviation. To test if the three somatotype groups have statistically significant differences in body image awareness, a one-way ANOVA will be performed. If significant differences are identified, post-hoc analyses like Tukey's HSD test will highlight group differences. This analysis will show how somatotype affects college students' body image awareness.

4. RESULTS

The Body Self-Image Questionnaire scores were compared between Mesomorphs, Ectomorphs, and Endomorphs to assess body image awareness.

Table 1 Descriptive Statistics

Somatotype Group	Mean Score	Standard Deviation	Minimum Score	Maximum Score
Mesomorph	85.52	4.52	74.00	93.00
Ectomorph	90.62	4.76	80.00	99.00
Endomorph	98.98	4.38	88.00	107.00

Endomorphs had the highest mean Body Self-Image Questionnaire score of 98.98, followed by Ectomorphs at 90.62 and Mesomorphs at 85.52. This shows Endomorphs in the sample had a better body image than the other two somatotypes.

Table 2 Results of One-way ANOVA

Source of Variation	Sum of Squares	df	Mean Square	F-Value	p-Value
Between Groups	4640.47	2	2320.24	111.31	< 0.001
Within Groups	3062.47	147	20.83		

To determine if the three somatotype groups' body image awareness differences were statistically significant, a one-way ANOVA was performed. Results show a important effect of somatotype on body image scores ($F(2, 147) = 111.31$, $p < 0.001$), indicating a considerable difference in body image awareness among some groups.

Table 3 Post-Hoc Analysis: Tukey's HSD Test

Group 1	Group 2	Mean Diff	p-adj	Lower CI	Upper CI	Reject H_0
Ectomorph	Endomorph	-8.36	0.001	-10.47	-6.26	Yes
Ectomorph	Mesomorph	5.10	0.001	3.00	7.20	Yes
Endomorph	Mesomorph	13.46	0.001	11.36	15.57	Yes

Post-hoc analysis retaining Tukey's HSD test showed noteworthy body image awareness changes between somatotype groups. Endomorphs reported stronger body image awareness than Ectomorphs by 8.36 points with a p-value of 0.001. Endomorphs exhibited a much more favorable body image than Mesomorphs, with a mean difference of

13.46 and a p-value of 0.001. Finally, Ectomorphs had a mean difference of 5.10 with a p-value of 0.001, showing that they viewed their body image better. The group differences in body image awareness were highly statistically significant in all pairwise comparisons with p-values below 0.001. Endomorphs had the highest body image awareness in this sample, suggesting that somatotype influences body image perception.

5. DISCUSSION ON FINDINGS

The study found that Endomorphs were the most aware of their bodies, followed by Ectomorphs and Mesomorphs. Researchers have found that Mesomorphs and other strong people have better body image views because society values muscular bodies. This new study's results are strange and contradictory. Our results show that body image awareness isn't just affected by how someone looks or by societal norms. It's also affected by how they see themselves, by social factors, and by their own experiences.

6. SOMATOTYPE AND BODY IMAGE

To understand the reason Endomorphs are so self-aware about their bodies, look at cultural and social factors. It was found by Cash and Pruzinsky (2002) that how someone internalizes society beauty standards, personal pleasure, and social acceptance affects how aware they are of their body image. Endomorphic people might be happiest in non-Western cultures that value larger bodies for being strong, fertile, and wealthy. Mitchison et al. (2014) discovered that societies that support a range of body types may help people with bigger bodies feel good about their aesthetics.

Ectomorphs, on the other hand, had the second-highest body image marks because they are leaner and slimmer bodies. This might be because of the way people think about beauty these days. In many countries, especially Western ones, being thin is seen as beautiful. Grabe, Ward, and Hyde (2008) say that seeing thin women in the media makes people internalize these body ideals, which may have a good effect on how people with an ectomorphic body type feel about their bodies. These people may think that their slimness fits with social ideas of what is attractive, which could explain why they are so aware of their bodies.

Mesomorphs had the lowest marks for body image awareness, even though they were tall and athletic. A recent study found that athletic people have a better view of their bodies. Tiggemann and Slater (2004) said that athletic women often feel pushed to keep up an idealized level of muscle, which can make them unhappy with their bodies. Pritchard and Tiggemann (2008) found that mesomorphic people often feel pressure to be fit and toned, which can make them unhappy and anxious. Even though Mesomorphs in this study had good looks, they may not have been as aware of their bodies because they felt pressured to have a "ideal" athletic form.

7. THE ROLE OF CULTURAL AND SOCIAL INFLUENCES

Body image is affected by cultural norms and group pressure. Teenagers' thoughts on body image are affected by media, social media, and conversations with friends. Fouts and Burggraf say that media, especially images of thin or strong people, can make people unhappy and set unrealistic goals, which can lead to lower body image awareness. This study's somatotype groups may have different ideas about how they look because students may compare themselves to peers who have the "ideal" body type in their society.

Personal things like feeling like you belong and your self-esteem can also affect body pleasure. Neumark-Sztainer et al. (2006) found a link between being happy with your body and feeling good about yourself in social situations. One study suggests that endomorphs may feel more accepted in society, which could make them feel better about their bodies. Society's push to lose weight may also help ectomorphs, while tighter standards may make mesomorphs less aware of their body image.

8. IMPLICATIONS FOR BODY IMAGE INTERVENTIONS

These effects have big effects on body image support and therapy programs. The big differences in somatotypes mean that body image treatments need to be tailored to each person and their situation. Programs for Mesomorphs might need to ease the pressure to fit into ideas of having a lot of muscle, and programs for Endomorphs might need to

encourage diversity and fight the negative stereotypes that come with having a bigger body. Ectomorphs might also benefit from programs that boost body confidence but don't focus on how thin people should be.

These methods might need self-compassion and knowledge of how to use media to improve body image. Tiggemann and Slater say that media literacy, which teaches people to think critically about how media portrayals them. Self-compassion and intrinsic characteristics programs can help anyone have a good relationship with their body, no matter what their somatotype is.

9. CONCLUSION

The study's conclusion is that somatotype has a big effect on how college students feel about their bodies. The results show that different somatotypes may have different ideas about how they look, which challenges the idea that body image is only affected by social expectations. Endomorphs were the greatest aware of their body image, which could be because broader body types are more accepted in culture. Mesomorphs, on the other hand, were less aware because they felt pressured to stick to idealized athletic forms. Based on these results, it seems that body image interventions should be tailored to the unique problems and situations of different body types in order to encourage a positive and inclusive body image for all somatotypes.

CONFLICT OF INTERESTS

None.

ACKNOWLEDGMENTS

None.

REFERENCES

Cash, T. F., & Pruzinsky, T. (2002). Body Image: A Handbook of Theory, Research, and Clinical Practice. Guilford Press.

Cash, T. F., & Smolak, L. (2011). *Body image: A handbook of science, practice, and prevention* (2nd ed.). Guilford Press.

Eisenberg, D., Nicklett, E. J., Roeder, K., & Kirz, N. E. (2011). Eating disorder symptoms among college students: Prevalence, persistence, correlates, and treatment-seeking. *Journal of American College Health, 59*(8), 700–707.

Fouts, G. T., & Burggraf, K. (2000). The Influence of Media on College Students' Body Image. Body Image, 7(2), 191–200.

Fredrickson, B. L., & Roberts, T. A. (1997). Objectification theory: Toward understanding women's lived experiences and mental health risks. *Psychology of Women Quarterly, 21*(2), 173–206.

Grabe, S., Ward, L. M., & Hyde, J. S. (2008). The role of the media in body image concerns among women: A meta-analysis of experimental and correlational studies. *Psychological Bulletin, 134*(3), 460–476.

Grabe, S., Ward, L. M., & Hyde, J. S. (2008). The Role of the Media in Body Image Concerns Among Women: A Meta-Analysis of Experimental and Correlational Studies. Psychological Bulletin, 134(3), 460–476.

Lipson, S. K., & Sonneville, K. R. (2017). Eating disorder symptoms among undergraduate and graduate students at 12 U.S. colleges and universities. *Eating Behaviors, 24*, 81–88.

Mitchison, D., Hay, P., Slewa-Younan, S., & Touyz, S. (2014). The Role of Body Shape and Weight in Body Image Perception in Adults. Eating Disorders, 22(1), 17–33.

Murray, S. B., Nagata, J. M., Griffiths, S., Calzo, J. P., Brown, T. A., Mitchison, D., Blashill, A. J., & Mond, J. M. (2017). The enigma of male eating disorders: A critical review and synthesis. *Clinical Psychology Review, 57*, 1–11.

Neumark-Sztainer, D., Story, M., Hannan, P. J., Tharp, T. M., & Rex, J. (2006). Weight-Related Concerns and Behaviors in Adolescents: Implications for Prevention. American Journal of Preventive Medicine, 33(1), 43–49.

Petrie, T. A., Tripp, M. M., & Harvey, P. (1996). Body satisfaction, self-esteem, and depression in college women: The role of weight- and appearance-related comparisons. *Journal of College Student Psychotherapy, 11*(2), 77–92.

Pritchard, M., & Tiggemann, M. (2008). Objectification and Body Image in Women: The Influence of Age and Physical Attractiveness. Sex Roles, 58(1–2), 58–67.

Puhl, R. M., & Heuer, C. A. (2009). The stigma of obesity: A review and update. *Obesity, 17*(5), 941–964.

Sheldon, W. H. (1940). *The varieties of human physique: An introduction to constitutional psychology*. Harper & Brothers.

Tiggemann, M., & Slater, A. (2004). Body Image and Adolescent Girls: The Role of Peer and Media Influences. Body Image, 1(4), 317–327.

Tiggemann, M., & Slater, A. (2014). The Role of Media in the Development of Body Image in Children and Adolescents. Body Image, 11(3), 304–308.