Redeemer's University Journal of Management and Social Sciences, Vol. 7 (1) 2024

INFLUENCE OF HEALTH LOCUS OF CONTROL AND SELF-ESTEEM ON BODY IMAGE DISSATISFACTION IN UNIVERSITY STUDENTS

Mopa-Egbunu, Adenike
Department of Psychology,
Redeemer's University, Ede, Osun State, Nigeria
adegbayiad@run.edu.ng

ABSTRACT
The aim of the study was to investigate the influence of health locus of control and self-esteem on body image satisfaction in a cohort of emerging adults. Participants were 371 female and male undergraduate students. The questionnaire contained measures of health locus of control (MHLC), self-esteem (RSES) and body image dissatisfaction (BSQ-8C). Mean age of respondents was 18.58. Males differed from females in their experience of body image dissatisfaction with females reporting higher dissatisfaction levels (t (371) = -5.58, p < .01). Of all subscales of HLC, only CHLC significantly influenced the experience of body dissatisfaction. There was a joint influence of self-esteem and HLC, with both variables accounting for 15% of variance on the experience of body dissatisfaction F (4, 366) = 6.22, p<.05, R^2 =0.15). These findings support the proposals from health professionals that body image dissatisfaction arise from a complex interplay of individual characteristics and social factors. In particular, the findings highlight the need for future research examining these variables in young adults outside academic settings.

Keywords: *Health locus of control, self-esteem, body image, body image dissatisfaction, university students*

INTRODUCTION

Body image, which is defined as the image that every human being constructs of his/her own body throughout the life, has been demonstrated to help humans keep up with their personal needs and to the environment in which we live (Almeida et al., 2006). Yadav et al. (2019) expanded on the concept of body image by defining it as a mental image that an individual holds keeping in mind the size, shape and contour of their own body along with the thoughts and feelings that are associated with the various parameters that constitute our bodies. Consequently, an individual's body image might not necessarily bear any resemblance to reality and can be either positive or negative. Body image dissatisfaction (BID) is closely related to body image and it is defined as the depreciation of body weight and physical appearance resulting from a perceived discrepancy between the actual body image and the ideal body image (LePage et al., 2010). BID has been associated with several psychological constructs such as social anxiety, psychological distress, depression and a wide variety of other experiences that diminish self-efficacy and reduce an individual's quality of life (Luqman & Dixit, 2017; Pawijit et al., 2019; Ratnasari et al., 2021; Dou et al., 2023). Researchers also agree that BID has evolved over time. For instance, BID was previously thought to be prevalent among females (Karazsia et al., 2017; Grogan, 2021). There is however evidence in literature suggesting BID in males (McCabe & Ricciardelli, 2004; Ferrari et al., 2015; Murray et al., 2020). This has been adduced to the influence of the Western perception of 'thin ideal' for females and 'muscular perfection' for males (Brown & Slaughter, 2011; Chapa et al., 2020).

Self-esteem, usually defined as an individual's confidence in the ability to think; confidence in the ability to cope with the challenges of life; and confidence in the right to be happy, the feeling of being worthy, to assert their needs and wants and to enjoy the fruits of their efforts (Branden, 1990) has been associated with

BID. Since self-appraisal is a source of self-esteem, it is usually associated with similar concepts that result from an appraisal of self of such as BID (Pop, 2016; George et al., 2020). Self-esteem is key in understanding BID because how a person views his or her appearance (body image) in the long run would also determine if that person would be satisfied in their own skin/body be it in size, weight, height or shape.

Health locus of control (HLC) refers to the degree to which individuals believe they have the power to control various factors (either internal or external) that

affect their lives (Kassianos, et al., 2016). It is a construct used to categorize an individual's basic motivational orientations and perceptions of how much control they have over the conditions of their health outcomes. Individuals with an external health locus of control (eHLC) orientation perceive their health states and outcomes as arising from factors out of their control while individuals who

possess an internal health locus of control orientation (iHLC) perceive and take personal agency over their health states and are more likely to engage in and with health-related behaviours (Di Corrado et al., 2021). In the context of body image dissatisfaction, an individuals' HLoC orientation plays an important role in determining the relative importance of personal agency or external factors in predicting the behaviours an individual employs in thinking about and resolving body dissatisfaction.

The existence of BID in adolescence and early adulthood is well established (Duarte et al., 2022; Jiménez-Limas et al., 2022; Lobo et al., 2020). however, due to the evolving nature of psychological health due to advancements in health and technology, it is imperative that BID studies are carried out to understand salient issues around BID in young adults growing up in an ever-evolving technology era. In addition, BID is as much a social construct as it is a health construct and has been associated with health-related variables such as eating disorders and exercise intentions (Jiménez-Limas et al., 2022; Prnjak et al., 2021; Leng et al.,

2020; Mathisen et al., 2020) studying BID in relation to HLC can lend valuable insights into how health orientations can influence BID.
The present study aims to explore the influence of HLC and self-esteem on BID in a cohort of emerging adults drawn from a University in Western Nigeria. Given, the physiological difference in body composition, it is hypothesized that:
H1: There is a significant gender difference on the experience of BID in males and females.
H2: Self-esteem and components of HLC (iHLC, cHLC and pHLC) will significantly influence the experience of BID in the sample.
H3: Self-esteem and HLC will jointly influence BID.

METHOD

The study adopted a cross-sectional descriptive survey design and sampled 400 students across all academic faculties at the Redeemer's University. Convenient sampling was then adopted to select a minimum of 40 students from each faculty across each level. Inclusion criteria for the study were that participants must be currently enrolled in an undergraduate programme in the university and have no known or diagnosed eating disorders. Ethical approval for the study was obtained from the ethics research panel based at the department of Behavioural Studies at the Redeemer's University.
Research Instrument: A structured questionnaire was employed in assessing BID, HLoC and self-esteem. The questionnaire comprised of 4 sections;

The first section consisted of 5 questions aimed at surveying the demographic characteristics of respondents.
The second section consisted of the Body Shape Questionnaire (BSQ-8C) (Evans & Dolan, 1993), and is a shortened version of the 32-item Body Shape Questionnaire (Cooper, Taylor, Cooper & Fairburn, 1987). The BSQ-8C consists of eight items on a 6-point Likert scale from one (never) to six (always) with scores ranging from 6 to 48. The BSQ-8C is considered a valid and reliable instrument

for measuring BID among young adults in several locations (Welch et al., 2012; Dodeen et al., 2022; Fernandes et al., 2023).
The third section consisted of the Multidiemsional Health Locus of Control Scale (MHLC, Form C). Developed by Wallston, Wallston, Kaplan & Maides (1976), the MHLC is comprised of 18items evaluating health locus of control (HLC) on three distinct dimensions: Internal, External Chance, and External Others. Each item is a belief statement about an individual's health state respondent's medical condition with which respondent may agree or disagree. Responses are on a six-point Likert scale ranging from one (strong disagreement) to six (strong agreement). Scores on each subscale can range from 6-36 with higher scores indicating stronger beliefs. The MHLC has been validated in several locations and populations (Mirzania et al., 2020; Grover et al., 2021; Holroyd et al., 2017).
The fourth section consisted of the Rosenberg Self-Esteem Scale (RSES) (Rosenberg, 1965). The scale comprises of 10 items, 5 of which are negatively worded and 5 which are positively worded. All items are scored on a 4-point Likert scale, with answers ranging from one (strongly disagree) to four (strongly agree) with scores ranging from 10-40 with lower numbers indicating low self-esteem. The scale has been reported to possess excellent psychometric properties (Li et al., 2019; Akhter and Ferdous; Blascovich and Tomaka, 1993; Rosenberg, 1986).
Data Analysis: Data were analyzed using Statistical Package for the Social Sciences (SPSS) software. Descriptive statistics (mean, standard deviation, frequency and percentage) was applied in establishing the prevalence of the study variables among the population. This was also used to describe the socio-demographics of the study participants. Pearson Product Moment Correlation was used to test for the relationship existing among the study variables.

RESULTS

Socio-Demographic Data of Respondents
The sociodemographic characteristics of participants were examined and presented in Table 1.

Table 1: Socio-Demographic Characteristics of Participants

Variables		Frequency	Percentage
Sex	Male	140	37.7
	Female	231	62.3
	Total	371	100.0
Faculty	Humanities	36	9.7
	Social Sciences	85	22.7
	Management Sciences	65	17.5
	Basic Medical Sciences	53	14.3
	Engineering	41	11.1
	Law	50	13.5
	Natural Sciences	41	11.1
	Total	371	100.0
Relationship Status	Single	336	90.6
	Committed	26	7.0
	Undecided	9	2.4
	Total	371	100.0
Age (in years)	Mean 18.58; SD= 1.91 Ranges between 16 to 26		
Weight	Mean 63.95; SD= 12.67 Ranges between 62 to 100		

The sample of the present study comprised of 371 undergraduate students drawn from nine faculties. About a third of participants were female (62.3%). Participants age ranged from 16 and 26 years (Mean=18.58; SD=1.9). with a mean weight of 63.95.

Test of Hypotheses

Table 2: Summary of Independent T-test showing Influence of Gender on BID

Dependent Factors	Sex	N	Mean	SD	df	t	p
Body Dissatisfaction	Male	140	14.66	6.90	369	-5.58	< .01
	Female	231	19.47	8.66			

The results indicated a significant sex difference on BID in the sample [t (371) = -5.58, p < .01]. Females experienced (M= 19.47; SD= 8.66) experienced higher levels of body dissatisfaction than males [M= 14.66; SD= 6.90)] thus confirming the hypothesis.

Table 3: Simple Regression of Self-Esteem on BID

Variable	B	β	SE
Constant			1.26
Self-Esteem	-0.04	-0.23	4.54
R^2	.05		

Note. N= 371

Table 3 reveals the impact of self-esteem on BID. The R^2 value of .05 revealed that the predictor variable explained 5% variance in the outcome variable with F (1, 369)= 20.59, p < .0.05. The findings revealed that self-esteem levels significantly influenced BID [β = -.23, p < .05]. The hypothesis was therefore accepted.

Table 4: Simple Regression showing the Influence of IHLC on BID

Variable	B	β	SE
Constant			0.82
IHLC	-0.08	-0.04	1.63
R^2	.02		

Note. N= 371

Table 4 above reveals that IHLC did not significantly influence BID in the sample F (1, 369)= 0.71, p > .0.05) [β = -.04 p > .05]. The hypothesis was therefore rejected.

Table 5: Simple Regression showing the Influence of CHLC on BID

Variable	B	β	SE
Constant			0.03
IHLC	-0.06	.11	1.54
R^2	.14		

Note. N= 371

Table 5 reveals that CHLC significantly influenced the experience of BID in the sample F (1, 369)= 0.48, p>.0.05) [β = .11 p > .05]. The result confirmed the hypothesis and it was accepted.

Table 6: Simple Regression showing the Influence of PHLC on BID

Variable	B	β	SE
Constant			0.14
IHLC	-0.06	.11	1.31
R^2	.14		

Note. N= 371

Table 6 reveals that PHLC does not significantly influence the experience of BID in the sample F (1, 369)= 2.39, p > .0.05) [β = 0.80 p > .05]. The hypothesis was thus rejected.

Table 7: Multiple Regression showing the joint Influence of HLOC and Self-Esteem on BID

Variables	B	T	R	R^2	df	F
			.25	.15	4,366	6.22**
IHLC	-.02	-.33				
CHLC	.05	.80				
PHLC	.08	1.38				
Self Esteem	-.22	-4.20**				

Table 7 shows that HLOC and self-esteem have a joint influence on BID in the current sample [F (4, 366) = 6.22, p<.05, R^2 =0.15). This result signified that 15% of the variance observed in body dissatisfaction would be attributed to health locus of control and self-esteem. This result confirmed the hypothesis and was accepted.

DISCUSSION OF FINDINGS

This study examined the influence of health locus of control and self-esteem on BID among undergraduates' students. Sociodemographic variables have consistently been linked to BID (Albawardi et al., 2021; Larson et al., 2021). The results of the present study reveal a significant gender difference in the experience of BID. Females reported significantly higher BID than males. This result is consistent with the literature on gender differences in the BID experience (Legkauskas & Kudlaitė, 2022; Navarro-Patón et al., 2021; Fischetti et al., 2020; Rattan et al., 2006).

Furthermore, the current study found that self-esteem significantly influenced BID. The hypothesis that individuals who have body dissatisfaction will have lower self-esteem was supported. This result confirms research on the

relationship between self-esteem and BID (Vall-Roqué et al., 2021; Pop, 2016). The prevalence of BID and its link to self-esteem especially in women has been linked to social and cultural contexts of the thin ideal which shapes a self-critical orientation towards physical appearance that is manifested in comparism tendencies and associated with negative self-esteem. The implication for this is that health professionals who deal with adolescent health must take into consideration psychosocial factors such as self-esteem when addressing BID issues in young adults.

The current study reveals interesting and significant relationship between HLC variables and BID. While IHLC and PHLC did not significantly influence BID, CHLC was found to significantly influence BID. The body of research on HLC and BID is mixed. While some studies have reported that individuals possessing IHLC reported lower BID (Kondhare, 2024), other have found an opposite pattern in relation to the experience of BID (Ioana, 2021). Understanding the relationship between HLC and BID can serve as a bassline knowledge for understanding the

non-medica contexts of health-related BID issues such as disordered eating and body dysmorphia.

It is important to highlight the limitations of the study should be addressed. First, by using a self-report questionnaire, data may be susceptible to selective or erroneous reporting. Second, the cross-sectional nature of the study does not permit clearly stating the causal relationships between the variables. The peculiarity of the sample must also be taken into consideration when interpreting the results. Emerging adults are at a transitory developmental phase as such, their concept of the body ideal may evolve with future developmental stages.

In conclusion, this research explored the influence of HLC and self-esteem on BID in a cohort of emerging adults. The results of this study reveal significant association between self-esteem and external HLC component pointing to the possibility that health information in the psychological aspects of BID may not adequately cater to the needs of emerging adults. For this reason, it is important, it is crucial to provide wholesome support from health professionals and other caregivers (parents, teachers and other educators).

REFERENCES

Albawardi, N. M., AlTamimi, A. A., AlMarzooqi, M. A., Alrasheed, L., & Al-Hazzaa, H. M. (2021). Associations of body dissatisfaction with lifestyle behaviors and socio-demographic factors among Saudi females

attending fitness centers. Frontiers in Psychology, 12, 611472. https://doi.org/10.3389/fpsyg.2021.611472

Almeida, R. D., Meireles, V. C., Salimena, A. M. O., & Melo, C. S. C. (2006). Compreendendo os sentimentos da Pessoa com Colostomia. Rev Estima, 4(3), 26-34.

Brown, F. L., & Slaughter, V. (2011). Normal body, beautiful body: Discrepant perceptions reveal a pervasive 'thin ideal'from childhood to adulthood. Body image, 8(2), 119-125. https://doi.org/10.1016/j.bodyim.2011.02.002

Chapa, S., Jordan Jackson, F. F., & Lee, J. (2020). Antecedents of ideal body image and body dissatisfaction: The role of ethnicity, gender and age among the consumers in the USA. Journal of Global Fashion Marketing, 11(2), 190-206. https://doi.org/10.1080/20932685.2019.1703780

Di Corrado, D., Coco, M., Guarnera, M., Maldonato, N. M., Quartiroli, A., & Magnano, P. (2021). The influence of self-efficacy and locus of control on body image: a path-analysis in aspiring fashion models, athletes and students. International Journal of Environmental Research and Public Health, 18(11), 6128. https://doi.org/10.3390/ijerph18116128

Dodeen, H., & Nassar, Y. (2022). Factorial Equivalence and Validation of Three Versions of the Body Shape Questionnaire. The Open Psychology Journal, 15(1). DOI: 10.2174/18743501-v15-e2206150

Dou, Q., Chang, R., & Xu, H. (2023). Body dissatisfaction and social anxiety among adolescents: a moderated mediation model of feeling of inferiority, family cohesion and friendship quality. Applied Research in Quality of Life, 18(3), 1469-1489. https://doi.org/10.21203/rs.3.rs-2031762/v1

Duarte, L. S., Chinen, M. N. K., & Fujimori, E. (2021). Distorted self-perception and dissatisfaction with body image among nursing students. Revista da Escola de Enfermagem da USP, 55. https://doi.org/10.1590/S1980-220X2019042903665

Fernandes, H. M., Soler, P., Monteiro, D., Cid, L., & Novaes, J. (2023). Psychometric Properties of Different Versions of the Body Shape Questionnaire in Female Aesthetic Patients. In Healthcare (Vol. 11, No. 18, p. 2590). MDPI. https://doi.org/10.3390/healthcare11182590

Ferrari, E. P., Minatto, G., Berria, J., Silva, S. D. S., Fidelix, Y. L., Ribeiro, R. R., ... & Petroski, E. L. (2015). Body image dissatisfaction and anthropometric indicators in male children and adolescents. European Journal of Clinical Nutrition, 69(10),1140-1144. https://doi.org/10.1038/ejcn.2014.252

Fischetti, F., Latino, F., Cataldi, S., & Greco, G. (2020). Gender differences in body image dissatisfaction: The role of physical education and sport. https://doi.org/10.14198/jhse.2020.152.01

George, M., George, N., Ajmal, S., Paul, A., Aathira, M. S., & Amruthavani, A. K. (2020). Self-esteem and body-image dissatisfaction among adolescents: A cross-sectional study. Indian Journal of Community and Family Medicine, 6(2), 157-162.

Grogan, S. (2021). Body image: Understanding body dissatisfaction in men, women and children. Routledge. https://doi.org/10.4324/9781003100041

Grover, S., Dua, D., Chakrabarti, S., & Avasthi, A. (2021). Religiosity and Spirituality of patients with severe mental disorders. Indian Journal of Psychiatry, 63(2), 162-170. *DOI:* 10.4103/psychiatry.IndianJPsychiatry_87_20

Ioana, F. D. (2023). Locus Of Control And Social Desirabilitaty At Women With Plastic Surgery. European Proceedings of Educational Sciences. 10.15405/epes.23045.95

Jiménez-Limas, K., Miranda-Barrera, V. A., Muñoz-Díaz, K. F., Novales-Huidobro, S. R., & Chico-Barba, G. (2022). Body dissatisfaction, distorted body image and disordered eating behaviors in university students: an analysis from 2017–2022. International Journal of Environmental Research and Public Health, 19(18), 11482. https://doi.org/10.3390/ijerph191811482

Karazsia, B. T., Murnen, S. K., & Tylka, T. L. (2017). Is body dissatisfaction changing across time? A cross-temporal meta-analysis. Psychological bulletin, 143(3), 293. http://dx.doi.org/10.1037/bul0000081

Kondhare, K. D. (2024). COVID-19, Tattoos and How It Has Affected Locus of Control, Risk-Taking Behaviour, Self-Esteem and Body Image: A Quantitative Study. https://doi.org/10.20944/preprints202403.0517.v1

Larson, N., Loth, K. A., Eisenberg, M. E., Hazzard, V. M., & Neumark-Sztainer, D. (2021). Body dissatisfaction and disordered eating are prevalent problems among US young people from diverse socioeconomic backgrounds: Findings from the EAT 2010–2018 study. Eating Behaviors, 42, 101535. https://doi.org/10.1016/j.eatbeh.2021.101535

Leng, H. K., Phua, Y. X. P., & Yang, Y. (2020). Body image, physical activity and sport involvement: A study on gender differences. Physical Culture and Sport. Studies and Research, 85(1), 40-49. https://doi.org/10.2478/pcssr-2020-0005

Legkauskas, V., & Kudlaitė, U. (2022). Gender differences in links between daily use of Instagram and body dissatisfaction in a sample of young adults in Lithuania. Psychological Topics, 31(3), 709-719. https://doi.org/10.31820/pt.31.3.12

LePage, M. L., & Crowther, J. H. (2010). The effects of exercise on body satisfaction and affect. Body image, 7(2), 124-130. https://doi.org/10.1016/j.bodyim.2009.12.002

Lôbo, I. L. B., Mello, M. T. D., Oliveira, J. R. V. D., Cruz, M. P., Guerreiro, R. D. C., & Silva, A. (2020). Body image perception and satisfaction in university students. Revista Brasileira de Cineantropometria & Desempenho Humano, 22, e70423. https://doi.org/10.1590/1980-0037.2020v22e70423

Luqman, N., & Dixit, S. (2017). Body image, social anxiety and psychological distress among young adults. International Journal of Multidisciplinary and Current Research, 9(1), 149-152.

Mathisen, T. F., Aambø, J., Bratland-Sanda, S., Sundgot-Borgen, C., Svantorp-Tveiten, K., & Sundgot-Borgen, J. (2020). Body figure idealization and body appearance pressure in fitness instructors. Frontiers in Psychology, 11, 585901. https://doi.org/10.3389/fpsyg.2020.585901

McCabe, M. P., & Ricciardelli, L. A. (2004). Body image dissatisfaction among males across the lifespan: A review of past literature. Journal of psychosomatic research, 56(6), 675-685. https://doi.org/10.1016/S0022-3999(03)00129-6

Murray, S. B., Brown, T. A., Lavender, J. M., Nagata, J. M., & Keel, P. K. (2020). The evolving nature of weight dissatisfaction and eating behaviors among men: Secular trends among college men across four decades. Journal of Abnormal Psychology, 129(8), 824. DOI: https://dx.doi.org/10.1037/abn0000587

Mirzania, M., Khajavi, A., Kharazmi, A., & Moshki, M. (2020). Health literacy and quality of life among Iranian pregnant women: The mediating role of health locus of control. Medical Journal of the Islamic Republic of Iran, 34, 161. 10.47176/mjiri.34.161

Navarro-Patón, R., Mecías-Calvo, M., Pueyo Villa, S., Anaya, V., Martí-González, M., & Lago-Ballesteros, J. (2021). Perceptions of the body and body dissatisfaction in primary education children according to gender and age. A cross-sectional study. International Journal of Environmental Research and Public Health, 18(23), 12460. **https://doi.org/10.3390/ijerph182312460**

Pawijit, Y., Likhitsuwan, W., Ludington, J., & Pisitsungkagarn, K. (2019). Looks can be deceiving: body image dissatisfaction relates to social anxiety through fear of negative evaluation. International Journal of Adolescent Medicine and Health, 31(4), 20170031. https://doi.org/10.1515/ijamh-2017-0031

Pop, C. (2016). Self-esteem and body image perception in a sample of university students. Eurasian Journal of Educational Research, 16(64), 31-44.

Prnjak, K., Hay, P., Mond, J., Bussey, K., Trompeter, N., Lonergan, A., & Mitchison, D. (2021). The distinct role of body image aspects in predicting eating disorder onset in adolescents after one year. Journal of Abnormal Psychology, 130(3), 236.

Rattan, N., Kang, S., Guidance, D., Thakur, N., & Parthi, K. (2006). State self-esteem in relation to weight locus of control amongst adolescents. Journal of Indian Association for Child and Adolescent Mental Health, 2(1), 31-34. https://doi.org/10.1177/0973134220060104

Ratnasari, S. E., Pratiwi, I., & Wildannisa, H. (2021). Relationship between body image and social anxiety in adolescent women. European Journal of Psychological Research, 8(1), 65-72.

Vall-Roqué, H., Andrés, A., & Saldaña, C. (2021). The impact of COVID-19 lockdown on social network sites use, body image disturbances and self-esteem among adolescent and young women. Progress in Neuro-Psychopharmacology and Biological Psychiatry, 110, 110293. https://doi.org/10.1016/j.pnpbp.2021.110293

Welch, E., Lagerström, M., & Ghaderi, A. (2012). Body Shape Questionnaire: Psychometric properties of the short version (BSQ-8C) and norms from the general Swedish population. Body image, 9(4), 547-550. https://doi.org/10.1016/j.bodyim.2012.04.009

Yadav, S., & Srivastava, K. (2019). Body shape concerns and locus of control among young adults. International Journal of Research in Social Sciences, 9(8), 254-264.