

The Moderating Role of Body Satisfaction on the Relationship among Body Attitude, Positive and Negative Affect in University Students: A Cross-sectional Study

Muntaha, Hayat Ullah, & Muhammad Usman

Abstract

Background: In contrast to the attention it has received in related fields of research, body dissatisfaction has remained understudied within the field of public health. This is highly problematic, given a growing body of evidence implicating body dissatisfaction in a range of other public health concerns. This present study was examined the relationship among body satisfaction, body attitude, positive and negative affect in university students. Further, it examined the moderating role body satisfaction on the association among body attitude, positive and negative affect.

Methods: A purposive sampling technique was applied base on the cross-sectional design in present study. 300 university students with age ranged from 18 to 25 years ($M = 20.12$, $SD = 13.03$) were recruited from the different universities of twin's cities, Rawalpindi and Islamabad, Pakistan. Three scales were applied to assess body satisfaction, body attitude, positive and negative affect in university students.

Results: The present study's findings revealed that body attitude was positively associated with positive and negative affect in Pakistani university students. Further, body attitude was positively associated with body satisfaction. Moreover, lower level of body satisfaction was linked to positive and negative affect in university students. Additionally, this study demonstrated that higher level of body satisfaction was playing role of moderator between body attitude and positive and negative affect in university students. This analysis revealed that high level of body attitude was linked to positive and negative affect because it favors of lower level of body satisfaction in Pakistani students

Conclusions: this present study recommended that body attitude were triggered positive and negative affect in university students. Further, the complex interaction between body attitude and body satisfaction stimulated to positive and negative affect. It has very crucial implications for physiological and mental health wellbeing. There is a lot of approaches to improve body image naturally which is included psycho-education, cognitive behavioral therapy, and ecological approaches. Body image distress is a very important problems in all over the world that need effective responses for young students.

Keywords: Positive and negative affect, body attitude and body satisfaction.

1. BS scholar, Department of Psychology, Foundation University Islamabad, Pakistan.
2. Lecturer, Department of Psychology, University of Malakand, Pakistan.
3. MS scholar, Department of sociology, Government College University Main Campus Faisalabad, Pakistan

Correspondence concerning this article should be addressed to Muntaha, Department of Psychology, and Foundation University Islamabad, Pakistan. Email: muntaha6j@gmail.com

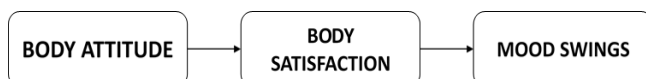
Background

Body image is characterized as attitudes and perceptions related to one's own somatic appearance (Burlew & Shurts, 2013; Carrard et al., 2021; Phillips & de Man, 2010; Sarfraz et al., 2021; Scheffers et al., 2019). Traditionally, body image problems were commonly occurred in young women. Conversely, it has also been observed that men experience more problems with body image regarding to their appearance, body shape, and weight that could lead to negative emotional and somatic outcomes (Carrard et al., 2021; Grieve et al., 2009; Harvey & Robinson, 2003; Schofield et al., 2008).

A similar study carried out by Grieve, et al. (2009), they found that millions of men who had experience complaints of body dissatisfaction globally (Grieve et al., 2009). Almost 10 to 15 percent man were diagnosed and experienced eating disorder in all over the world (Ahmed et al., 2021; Carlat et al., 1997; Scheffers et al., 2019), or 2.2 percent of males fulfilled the diagnostic criteria of body dysmorphic illness (Jaffri et al., 2021; Koran et al., 2008; Naeem et al., 2021; Rashid et al., 2021; Shahzad et al., 2021; Tahira & Jami, 2021). Furthermore, patients with moods swings and major depression disorders chronically found a wide range of problem's related to physical appearance including negative evaluation about their body, reduced feelings of vitality, lack of sexual interest as well as somatic problems such as long-lasting limb pain, back pain, joint pain and stomach issues (Saif et al., 2021; Scheffers et al., 2019).

Additionally, a similar studies found a positive association among psychomotor retardation, mood swings and major depression in women (Bennabi et al., 2013; Lecrubier, 2006; Scheffers et al., 2019). Many women experienced restricted sensorimotor space and decreased gait (Fuchs & Schlimme, 2009; Hafsa et al., 2021; Michalak et al., 2009; Scheffers et al., 2019; Toqeer et al., 2021) and enhanced standing stages and loose posture with decreased vertical movement of the upper portion of physique (Scheffers et al., 2019). A parallel study explained major depression illnesses not only by the fluctuations in cognition and mood, however further by variations in the peoples believe and thoughts of one's own body, like these variations mostly effect aggravate distress and daily functioning (Aqeel et al., 2018; Aqeel & Akhtar, 2017; Aqeel & Rehna, 2020; Doerr-Zegers et al., 2017; Munawar, Aqeel, & Husain, 2015). Body attitude consists of problematic cognitive schema for how peoples recognize their body appearance that could influence their psychosocial functioning and behaviours (Grilo et al., 2019; SmoLak, 2011). Several earlier studies found that there is increasing concern related body image in adolescents and adults, this occurring gradually in young adolescents (Aqeel et al., 2022; Ahmandvand & Besharat, 2021; Vichitrananda, 2021).

Conceptual framework



Method

Objectives

1. To examine the relationship among body satisfaction, body attitude, positive and negative affect in university students.
2. To investigate the moderating role body satisfaction on the relationship among body attitude, positive and negative affect in university students.

Hypotheses

1. Body attitude is positively related with positive and negative affect in university students.
2. Body satisfaction is negatively associated with positive and negative affect in university students.

Research design

A purposive sampling technique was used based on the cross-sectional design to perform this present study. This study was approved by Research Ethics Committee of the Department of Psychology, Foundation University Islamabad, Pakistan.

Sample

This study was approved by ethical review board of Foundation University Islamabad, Rawalpindi Campus, and Pakistan. This study was performed based on a purposive sampling technique and correlational study design. Three hundred participants (females, $n = 150$; males, $n = 150$) age ranged from 18 to 25 years ($M = 20.12$ years, $SD = 13.03$), they were recruited from the different universities of Rawalpindi and Islamabad, Pakistan. The following inclusion criteria was applied; only those volunteer regular student who were fulfilled criteria of mood disorder as per the Diagnostic and Statistical Manual of Mental Disorders criteria (DSM-IV-TR, APA, 2000). It was examined by professional psychologists through performing formal clinical interviews, standardize instruments including positive and negative affect schedule scale and critically evaluating school and family history. They were also evaluated by standardized positive and negative affect schedule scale before conduct this study. The following exclusion criteria was used; those students who were diagnosed in any other mental disorder, they were excluded from present study.

Measures

Three standardized psychological instruments were used to measure positive and negative affect, body attitude, and body satisfaction, in university students.

Positive and Negative Affect Schedule (PANAS).

Positive and negative mood swings was examined by positive and negative affect schedule scale in present study (Hussein & Vostanis, 2008). It consists on twenty items which are rated on a five point Likert scale ranging from 1 (very slightly or not at all applicable) to 5 (extremely applicable). It includes two features of mood such as positive and negative affect (Hussein & Vostanis, 2008). Higher scores on both subscale illustrate higher level of positive and negative affect. Lower scores on both subscale demonstrated lower prevalence of positive and negative affect. The positive and negative affect

schedule shown adequate reliability and validity in the present study.

The Body cathexis scale (BCS; Rekkers et al., 2021). It was examined by the body cathexis questionnaire (Rekkers et al., 2021), this scale was designed to examine body satisfaction including satisfaction with the body or to bodily functions, for instance: hands, vitality, eyes, coordination, health and weight in adults. It comprises of forty items which is rated on a five point Likert scale ranging between 1 (*very dissatisfied*) to 5 (*very satisfied*). Alpha coefficient reliability and validity was satisfactory in present study sample. The mean of above subscales provides a standardized score of body satisfaction. Higher scores on four subscales are revealed higher level of body satisfaction and lower scores on four subscales are illustrated body dissatisfaction and unhappiness.

Dresden Body Image Questionnaire (DBIQ, Bachner-Melman et al., 2021). It was examined by Dresden body image questionnaire (Bachner-Melman et al., 2021), it was designed to evaluate body dissatisfaction in adolescents and adults. It includes four subscales including vitality, physical contact, sexual fulfilment and self-aggrandizement. It comprises of thirty five items (e.g. I wish I had a different body) rated on a five point Likert scale ranging between 1 (*not at all*) to 5 (*fully agree*). Alpha coefficient reliability and validity was satisfactory in present study sample. The mean of above subscales provides a standardized score of body satisfaction. Higher scores on four subscales are revealed higher level of body satisfaction and lower scores on four subscales are illustrated body dissatisfaction and unhappiness.

Procedure

This study was sanctioned by the local ethical review board of Foundation University Islamabad, Rawalpindi Campus, and Pakistan. 300 university students (Females, $n = 150$; Males, $n = 150$) age ranged between 18 to 25 years ($M = 20.12$ years, $SD = 13.03$), were recruited from the different universities of Rawalpindi and Islamabad, Pakistan. Approval to carry out this study was acquired from the higher authorities of different universities. Volunteer participants and higher authorities were also ensured that data of present study would be kept confidential and it will only use for research purpose. Written and verbal inform consent were taken by all volunteer participants of this study. All volunteer participant underwent standardized psychological assessment such as positive and negative affect schedule scale, dresden body image questionnaire, and the body cathexis scale. These instruments were used to examine body attitude, body satisfaction, positive and negative mood swings in university students.

Analysis plan

Correlation and moderation analysis was used to confirm objectives and hypotheses of present study. Firstly, Imputation method was applied to handle missing values on positive and negative affect schedule scale, dresden body image questionnaire, and the body cathexis scale through statistical software SPSS (version-21). Secondly, correlational analysis was used to assess the association among body attitude, body satisfaction, positive and negative affects in university students (Field, 2013). Finally, moderation analysis was carried to evaluate the moderating role body satisfaction between body attitude, positive and

negative affects in university students (Baron & Kenny, 1986).

Results

In Table 1, this study's findings illustrated that body satisfaction was positively significantly associated with body attitude in university students. Additionally, body attitude was positively significantly associated with positive and negative affect in university students. Further, body satisfaction was negatively associated with negative affect and positive affect in university students. This study's findings was supported hypotheses and objective.

In model 1, this study's findings demonstrated that body attitude was positively significant predicting to overall positive and negative affect in university students. Additionally, it also illustrated that body satisfaction was negatively significant predicting to overall positive and negative affect. Moreover, interaction between body attitude and overall body satisfaction was negatively significant predicting to overall positive and negative affect. This present study revealed that body satisfaction was playing role of moderator between body attitude and overall positive and negative affect. A moderation analysis demonstrated that body attitude was associated with higher level of overall positive and negative affect since it favours of lower level of body satisfaction in university students.

In model 2, this study's findings demonstrated that body attitude was positively significant predicting to overall negative affect in university students. Additionally, it also illustrated that body satisfaction was negatively significant predicting to negative affect. Moreover, interaction between body attitude and body satisfaction was negatively significant predicting to negative affect. This present study revealed that body satisfaction was playing role of moderator between body attitude and negative affect. A moderation analysis demonstrated that body attitude was associated with higher level of negative affect since it favours of lower level of body satisfaction in university students.

In model 1, this study's findings demonstrated that body attitude was positively significant predicting to positive affect in university students. Additionally, it also illustrated that body satisfaction was negatively significant predicting to positive affect. Moreover, interaction between body attitude and body satisfaction was negatively significant predicting to positive affect. This present study revealed that body satisfaction was playing role of moderator between body attitude and positive affect. A moderation analysis demonstrated that body attitude was associated with higher level of positive affect since it favors of lower level of body satisfaction in university students.

Discussion

Young male and female may experience body image distress/dissatisfaction in all over the world. These behaviors and symptoms may frequently go underdiagnosed or unrecognized in globally. This lack of identification experiences due to the symptoms and behaviors are commonly rare and at the lower level on the continuum of body image dissatisfaction. Therefore, there is scarcity of

Results

Table 1

Mean standard deviation, alpha reliability coefficient, and correlation matrix of body satisfaction, body attitude and positive and negative effects in university students (N=300).

Variables	M	SD	α	1	2	3	4	5	6	7	8	9	10
1.Body attitude	154.4	32.7	.92	—	.06	.15**	.96	-.15*	.08	.05	.27**	.21**	.23*
2.Body satisfaction	101.4	20.91	.78		—	.60**	.73**	.68**	.71**	.66**	-.64*	-.54*	-.31*
3.Body acceptance	90.4	21.9	.75			—	.39**	.28**	.20**	.28**	-.07	-.03	-.04
4.Vitality	87.1	11.2	.74				—	.40**	.31**	.27**	-.48*	-.01	-.31*
5.Physical contact	84.4	10.2	.65					—	.35**	.59**	-.45*	-.21*	-.25*
6.Selfaggrandizement	83.9	4.20	.79						—	.32*	-.13	-.02	-.12
7.Sexualfulfillment	81.2	9.21	.60							—	-.34*	-.21*	-.19*
8.Positive and negative affect	70.1	.09	.70								—	.53**	.61**
9.Negative affect	25.02	.07	.67									—	-.31*
10.Positive affect	45.09	.05	.65										—

Note. * $p < .05$, ** $p < .01$

Table 2

The moderating role body satisfaction on the relationship among body attitude, positive and negative effects in university students (N=300)

<i>Variables</i>								
Models	DV	IV	B	SD	β	p	R^2	F^2
1	Panas	BA	.23	.04	.32	.01	.20	6.10**
		BS	-.21	.01	-.34	.00		
		BA*BS	-.13	.01	-.35	.00		
		Constant	1.02	.06		.00		
2	PA	BA	.15	.09	.23	.00	.18	5.01**
		BS	-.11	.01	-.43	.00		
		BA*BS	-.24	.01	-.53	.00		
		Constant	3.0	.02		.00		
3	NA	BA	.12	.09	.26	.01	.16	2.0**
		BS	-.15	.01	-.43	.00		
		BA*BS	-.11	.01	-.27	.00		
		Constant	1.00	.04		.00		

Note. PA= Positive affect; NA= Negative affect; Panas = Positive and negative affect; BA= Body attitude; BS= Body Satisfaction; Interaction between body attitude and body satisfaction, * $p < .05$, ** $p < .01$, *** $p < .001$

research on this interesting topic in Pakistani university students. This study was planned to examine the relationship among body satisfaction, body attitude, positive and negative affect in university students. Furthermore, it was also investigated the moderating role body satisfaction on the relationship among body attitude, positive and negative affect. The present study's results illustrated that higher level of body attitude was associated with positive and negative affect in Pakistani university students. Further, it was also positively linked to body satisfaction. Moreover, lower level of body satisfaction was linked to positive and negative affect in university students. Additionally, this study demonstrated that higher level of body satisfaction was playing role of moderator between body attitude and positive and negative affect in university students. This analysis revealed that high level of body attitude was linked to positive and negative affect because it favours of lower level of body satisfaction in Pakistani students. The results of earlier studies are supporting the current research objectives and hypotheses. Several previous researches demonstrated that body satisfaction and body attitude was associated with psychological illness such as stress, anxiety, depression (Aqeel et al., 2017; Burlew & Shurts, 2013; Carrard et al., 2021; Phillips & de Man, 2010; Scheffers et al., 2019; Shuja et al., 2020). A similar studies reported that patients with moods swings and major depression disorders chronically found a wide range of problem's related to physical appearance including negative evaluation about their body, reduced feelings of vitality, lack of sexual interest as well as somatic problems such as long-lasting limb pain, back pain, joint pain and stomach issues (Scheffers et al., 2019). a similar studies found a positive association among psychomotor retardation, mood swings and major depression in women (Bennabi et al., 2013; Lecrubier, 2006; Scheffers et al., 2019). Many women experienced restricted sensorimotor space and decreased gait (Fuchs & Schlimme, 2009; Michalak et al., 2009; Scheffers et al., 2019) and enhanced standing stages and loose posture with decreased vertical movement of the upper portion of physique (Scheffers et al., 2019). A parallel study explained major depression illnesses not only by the fluctuations in cognition and mood, however further by variations in the peoples believe and thoughts of one's own body, like these variations mostly effect aggravate distress and daily functioning (Doerr-Zegers et al., 2017). Body attitude consists of problematic cognitive schema for how peoples recognize their body appearance that could influence their psychosocial functioning and behaviors (Grilo et al., 2019; SmoLak, 2011). Several earlier studies found that there is increasing concern related body image in adolescents and adults, this occurring gradually in young adolescents (Ahmandvand & Besharat, 2021; Vichitrananda, 2021).

Limitations

There is dire need of present study to address and report a few possible drawbacks. First of all, psychological information related to participants was collected with self-report questionnaires that could be included da potential source of bias and error. Secondly, a cross-sectional design was applied in present study which cannot draw causal inferences through relationship among all study variables in student's sample. Finally, participants did not screen out from any psychological illness before conduct this study

which was included positive and negative affect and this study only included and considered normal university students. So, this study's results could not be applied on students with mental health problems.

Conclusion and implications

This present study recommended that body attitude were triggered positive and negative affect in university students. Further, the complex interaction between body attitude and body satisfaction stimulated to positive and negative affect. It has very crucial implications for physiological and mental health wellbeing. There is a lot of approaches to improve body image naturally which is included psycho-education, cognitive behavioral therapy, and ecological approaches. Body image distress is a very important problems in all over the world that need effective responses for young students.

Funding

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

Ethical Consideration

The study was approved by the Department of Psychology, Foundation University Islamabad, Pakistan. Consent Form was taken before taking data and participants were asked to take voluntary participation

Acknowledgement

The author thanks to department of Psychology, Foundation University Islamabad, Pakistan.

Availability of data and materials

The data sets used and analyzed during the current study are available from the corresponding author on reasonable request.

Authors' contributions/Author details

Muntaha, performed the main study. Hayat Ullah and Muhammad Usman wrote the article under the guidelines of Nature-Nurture Journal of Psychology.

Corresponding author

Correspondence to Muntaha.

muntaha6j@gmail.com

Ethics declarations

Ethics approval and consent to participate

This study was approved by the Institutional Review Board (Department of Psychology, Foundation University Islamabad, Pakistan). A written informed consent was obtained from all participants.

Consent for publication

Not applicable.

Competing interests

The authors declare to have no competing interests.

Additional Information

Not applicable.

Received: 3 October 2020 Accepted: 26 February 2022: 31 February 2022 published online

References

- Aqeel, M. & Akhtar, T. (2018). (2018). Psychological problems and its association to other symptoms in menopausal transition. *Pakistan Journal of Psychological Research*, 33(2), 507–519.
- Aqeel, M., & Rehna, T., Shuja, K. H., & Abbas, J. (2022). Comparison of students' mental wellbeing, anxiety, depression, and quality of life during COVID-19's full and partial (smart) lockdowns: a follow-up study at a five-month interval. *Frontiers in Psychiatrist*.
- Ahmed, A., Aslam, N., Ahmed, B., & Salim, S. (2021). Indigenous Mental Health Perspective in the Representation of Vertigo symptoms: A Cross Sectional Study of Vestibulocochlear Disorder Patients. *Nature-Nurture Journal of Psychology*, 1(2), 22–32.
- Aqeel, M., & Akhtar, T. (2017). Self or Others: Exploring the Role of Truancy as the link between Personality Traits and Peer Influences found in Truant Students. *GSTF Journal of Psychology*, 3(2), 11–17. https://doi.org/10.5176/2345-7872_3.2_44
- Aqeel, M., & Rehna, T. (2020). Association among school refusal behavior, self-esteem, parental school involvement and aggression in punctual and truant school-going adolescents: a multilevel analysis. *International Journal of Human Rights in Healthcare*, 13(5), 385–404. <https://doi.org/10.1108/IJHRH-06-2020-0041>
- Aqeel, M., Shah, D. A. A., Rohail, D. I., Ahsan, D. S., shahbaz, kanwal, & Ahmed, A. (2017). the Moderating Role of Parental School Involvement Between Parental Attachment and Problem Faced By Truant and Punctual Students. *PONTE International Scientific Researchs Journal*, 73(4), 1–10. <https://doi.org/10.21506/j.ponte.2017.4.20>
- Bachner-Melman, R., Lev-Ari, L., Zohar, A. H., & Linketsky, M. (2021). The eating disorders recovery questionnaire: psychometric properties and validity. *Eating and Weight Disorders-Studies on Anorexia, Bulimia and Obesity*, 1–11.
- Baron, R. M., & Kenny, D. A. (1986). The Moderator-Mediator Variable Distinction in Social Psychological Research. Conceptual, Strategic, and Statistical Considerations. In *Journal of Personality and Social Psychology* (Vol. 51, Issue 6). Psychological Association, Inc. <https://doi.org/10.1037/0022-3514.51.6.1173>
- Bennabi, D., Vandel, P., Papaxanthis, C., Pozzo, T., & Haffen, E. (2013). Psychomotor retardation in depression: A systematic review of diagnostic, pathophysiologic, and therapeutic implications. *BioMed Research International*, 2013. <https://doi.org/10.1155/2013/158746>
- Burlew, L. D., & Shurts, W. M. (2013). Men and body image: Current issues and counseling implications. *Journal of Counseling and Development*, 91(4), 428–435. <https://doi.org/10.1002/j.1556-6676.2013.00114.x>
- Carlat, D. J., Camargo, C. A., & Herzog, D. B. (1997). Eating disorders in males: A report on 135 patients. *American Journal of Psychiatry*, 154(8), 1127–1132. <https://doi.org/10.1176/ajp.154.8.1127>
- Carrard, I., Argyrides, M., Ioannou, X., Kvaalem, I. L., Waldherr, K., Harcourt, D., & McArdle, S. (2021). Associations between body dissatisfaction, importance of appearance, and aging anxiety with depression, and appearance-related behaviors in women in mid-life. *Journal of Women and Aging*, 33(1), 70–83. <https://doi.org/10.1080/08952841.2019.1681882>
- Doerr-Zegers, O., Irrázaval, L., Mundt, A., & Palette, V. (2017). Disturbances of Embodiment as Core Phenomena of Depression in Clinical Practice. *Psychopathology*, 50(4), 273–281. <https://doi.org/10.1159/000477775>
- Fang, A., Matheny, N. L., & Wilhelm, S. (2014). Body dysmorphic disorder. *Psychiatric Clinics of North America*, 37(3), 287–300. <https://doi.org/10.1016/j.psc.2014.05.003>
- Field, A. (2013). Andy Field - Discovering Statistics Using IBM SPSS Statistics. *Lavoisier.Fr*, 58, 1–816. <http://www.lavoisier.fr/notice/frMJO3AKKA6RIXLO.html%5Cnpapers2://publication/uuid/01872072-935D-4D89-AB3D-D7F41393EC7D>
- Fuchs, T., & Schlimme, J. E. (2009). Embodiment and psychopathology: A phenomenological perspective. *Current Opinion in Psychiatry*, 22(6), 570–575. <https://doi.org/10.1097/YCO.0b013e3283318e5c>
- Grieve, F. G., Truba, N., & Bowersox, S. (2009). Etiology, assessment, and treatment of muscle dysmorphia. *Journal of Cognitive Psychotherapy*, 23(4), 306–314. <https://doi.org/10.1891/0889-8391.23.4.306>
- Grilo, C. M., Ivejaz, V., Lydecker, J. A., & White, M. A. (2019). Toward an understanding of the distinctiveness of body-image constructs in persons categorized with overweight/obesity, bulimia nervosa, and binge-eating disorder. *Journal of Psychosomatic Research*, 126(June), 109757. <https://doi.org/10.1016/j.jpsychores.2019.109757>
- Hafsa, S., Aqeel, M., & Shuja, K. H. (2021). The Moderating Role of Emotional Intelligence between Inter-Parental Conflicts and Loneliness in Male and Female Adolescents. *Nature-Nurture Journal of Psychology*, 1(1 SE-), 38–48. <https://thenaturenurture.org/index.php/psychology/article/view/5>
- Harvey, J. A., & Robinson, J. D. (2003). Eating disorders in men: Current considerations. *Journal of Clinical Psychology in Medical Settings*, 10(4), 297–306.
- Jaffri, A. B., Mukhtar, S. A., & Rizvi, S. Z. H. (2021). Indigenous Mental Health Perspective in Cognitive Distortions: A Cross-Sectional Study of Coping Strategies, Cognitive Distortions and Depression in University Students. *Nature-Nurture Journal of Psychology*, 1(2), 45–54.
- Koran, L. M., Abujaoude, E., Large, M. D., & Serpe, R. T. (2008). The prevalence of body dysmorphic disorder in the United States adult population. *CNS Spectrums*, 13(4), 316–322.
- Lecrubier, Y. (2006). Physical components of depression and psychomotor retardation. *Journal of Clinical Psychiatry*, 67, 23.
- Michalak, J., Troje, N. F., Fischer, J., Vollmar, P., Heidenreich, T., & Schulte, D. (2009). Embodiment of sadness and depression—gait patterns associated with dysphoric mood. *Psychosomatic Medicine*, 71(5), 580–

- 587.
- Munawar, M., Aqeel, M., & Husain, W. (2015). *School Truancy: Psycho-social Factors in Truancy*. Germany: Lambert Publications. <https://www.amazon.com/School-Truancy-Psycho-social-Factors/dp/3848491400>
- Naeem, B., Aqeel, M., & de Almeida Santos, Z. (2021). Marital Conflict, Self-Silencing, Dissociation, and Depression in Married Madrassa and Non-Madrassa Women: A Multilevel Mediating Model. *Nature-Nurture Journal of Psychology*, 1(2), 1–11.
- Phillips, N., & de Man, A. F. (2010). Weight Status and Body Image Satisfaction in Adult Men and Women. *North American Journal of Psychology*, 12(1).
- Rashid, A., Aqeel, M., Malik, D. B., & Salim, D. S. (2021). The Prevalence of Psychiatric Disorders in Breast Cancer Patients; A Cross-Sectional Study of Breast Cancer Patients Experience in Pakistan. *Nature-Nurture Journal of Psychology*, 1(1 SE-), 1–7. <https://thenaturenurture.org/index.php/psychology/article/view/1>
- Rekkers, M. E., Scheffers, M., van Busschbach, J. T., & van Elburg, A. A. (2021). Measuring body satisfaction in women with eating disorders and healthy women: appearance-related and functional components in the Body Cathexis Scale (Dutch version). *Eating and Weight Disorders-Studies on Anorexia, Bulimia and Obesity*, 1–8.
- Saif, J., Rohail, D. I., & Aqeel, M. (2021). Quality of Life, Coping Strategies, and Psychological Distress in Women with Primary and Secondary Infertility; A Mediating Model. *Nature-Nurture Journal of Psychology*, 1(1 SE-), 8–17. <https://thenaturenurture.org/index.php/psychology/article/view/6>
- Sarfraz, R., Aqeel, M., Lactao, D. J., & Khan, D. S. (2021). Coping Strategies, Pain Severity, Pain Anxiety, Depression, Positive and Negative Affect in Osteoarthritis Patients; A Mediating and Moderating Model. *Nature-Nurture Journal of Psychology*, 1(1 SE-), 18–28. <https://thenaturenurture.org/index.php/psychology/article/view/8>
- Scheffers, M., van Duijn, M. A. J., Beldman, M., Bosscher, R. J., van Busschbach, J. T., & Schoevers, R. A. (2019). Body attitude, body satisfaction and body awareness in a clinical group of depressed patients: An observational study on the associations with depression severity and the influence of treatment. *Journal of Affective Disorders*, 242, 22–28. <https://doi.org/10.1016/j.jad.2018.08.074>
- Schofield, H. L. T., Bierman, K. L., Heinrichs, B., Nix, R. L., Coie, J. D., Dodge, K. A., Greenberg, M. T., Lochman, J. E., McMahon, R. J., & Pinderhughes, E. E. (2008). Predicting early sexual activity with behavior problems exhibited at school entry and in early adolescence. *Journal of Abnormal Child Psychology*, 36(8), 1175–1188. <https://doi.org/10.1007/s10802-008-9252-6>
- Shahzad, M., Munawar, K., & Riaz, F. (2021). Understanding Prevalence and Association of Suicidal Ideation, Deliberate Self-Harm, Stress, Anxiety Depression, and Mood Swings in Pakistan University Students: A Multilevel Analysis. *Nature-Nurture Journal of Psychology*, 1(2), 12–21.
- Shuja, K. H., Aqeel, M., Jaffar, A., & Ahmed, A. (2020). Covid-19 pandemic and impending global mental health implications. *Psychiatria Danubina*, 32(1), 32–35. <https://doi.org/10.24869/psyd.2020.32>
- SmoLak, T. F. C. Li. (2011). A Handbook of Science, Practice, and Prevention. In *THE GullfOrD PrESS New York london* (Vol. 13, Issue 2). Guilford press.
- Tahira, Q., & Jami, H. (2021). Association between Social Adjustment and Perceived Parenting Styles in Punctual, Truant, and High Achieving School Going Students: A Moderating Model. *Nature-Nurture Journal of Psychology*, 1(2), 33–44.
- Toqeer, S., Aqeel, M., Shuja, K. H., Bibi, D. A., & Abbas, D. J. (2021). Attachment Styles, Facebook Addiction, Dissociation and Alexithymia in University Students; A Mediatonal Model. *Nature-Nurture Journal of Psychology*, 1(1 SE-), 28–37. <https://thenaturenurture.org/index.php/psychology/article/view/2>
- Vichitrananda, C. (2021). *Impact of Body Image on Middle-Aged Thai Men's Self-Esteem and Job Performance*. Walden University.

Publisher's Note

The Nature-Nurture publishing group remains neutral with regard to jurisdictional claims in published maps and institutional affiliations