GENDER AND EDUCATIONAL LEVEL AS PREDICTORS OF INCIDENCE OF BODY DYSMORPHIA AMONG YOUNG ADULTS IN OWERRI

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ABSTRACT: This study investigated gender and educational level as factors predicting the incidence of body dysmorphia (BD) among young adults in Owerri. Nine hundred and nineteen (914) young adults comprising 447 males and 467 females aged 18 - 25 years with a mean age of 20.77 years and standard deviation of 2.18 were sampled from Owerri, via cluster sampling and random sampling techniques. Three hypotheses guided this work and data was collected using the Body Dysmorphia Questionnaire (BDQ). The data collected, was analyzed via descriptive statistics and regression analysis. The results of the present study revealed that gender predicted the incidence of BD among young adults. Educational level predicted the incidence of BD. Together, gender and educational level predicted the incidence of BD among young adults in Owerri. Discussions were made based on the findings of the current study and the literature. A critical recommendation of this work is that health professionals and clinical psychologists should adopt a comprehensive and individualized approach to screening and treating BD, taking into account patients' sociodemographic factors especially gender and educational background. This includes incorporating questions and assessments that explore how these factors influence patients' body image perceptions and tailoring interventions to address specific pressures and challenges faced by different demographic groups. Another recommendation is that counselors should offer culturally sensitive and gender-responsive counselling that acknowledges and addresses the unique societal and educational pressures influencing BD. Hence, to ensure that treatment plans are relevant and effective, the individual's specific context and experiences should be considered.

Keywords: Gender, Body Dysmorphia (BD), Incidence of BD, Educational Level

INTRODUCTION

Body dysmorphia (BD) is a common yet very under-recognized and understudied condition. It is marked by excessive preoccupation with one or more perceived physical flaws that are not observable or appear slight to others, prompts recurrent behaviours or thoughts in reaction to concerns and leads to a clinically significant reduction in functioning in the life of the individual (American Psychiatric Association [APA], 2013; Nezgovorova & Hollander, 2018). These distressing obsessions can centre on any part of the body and obsessive behaviours related to appearance result in repetitive, compulsive actions meant to ease emotional pain, which in turn, leads to feelings of shame, hopelessness, concern, sorrow or other unpleasant emotions (Malik et al., 2021). Some of these repetitive excessive behaviours include checking or avoiding mirrors, excessive changing of clothing, receiving surgery,

overgrooming, skin plucking, tanning, over exercising and looking for validation for perceived imperfections (Malik et al., 2021). Repetitive behaviours are difficult to control, consume approximately 3 - 8 hours a day, and lead to notable clinical impairments in academic, social, vocational, or other critical areas of functioning (Collison & Harrison, 2020; Phillips & Kelly, 2021). Research has shown that BD is common with a prevalence of 1.8% to 2.4% and appears to impact males and females equally (Malcolm et al., 2021), although some studies suggest a slightly higher prevalence in women (The Recovery Village, 2023). Most of these studies investigating BD among males and females have been conducted in the past (Hira et al., 2017; Enander et al., 2018), and few of such have investigated these features in recent years (McGrath et al., 2023; Malcolm et al., 2021). Again, there has been a significant change in technology and social processes over the past two decades and these changes might be expected to impact gender patterns in body areas of concern among BD individuals compared to many years ago. Therefore there is a need to re-evaluate and/or compare the characteristic features of males and females with respect to the incidence of BD. Thus, the purpose of this study is to explore gender as a predictor of the incidence of BD.

The impact of educational achievement on mental health, particularly body dysmorphia can vary. Studies indicate that a greater level of education may be linked to heightened awareness and sensitivity to body image concerns as a result of social demands, academic stress and other factors. Educational level and BD, however, have complicated relationships that vary depending on personal experiences and cultural variables.

The literature on BD in Africa, particularly Nigeria, is still scarce and under diagnosed (Akinboro et al., 2019), highlighting the need for improved understanding and reporting of this condition. To the best of our knowledge, no study has been carried out among young adults in Owerri that focused on BD and looked at sociodemographic variables. The few studies on BD in Nigeria have focused on its association with other psychopathologies or studied BD among inpatients (Soler et al., 2018). The emphasis on beauty is increasing in modern societies because of rapid changes and studies on people's attitudes towards appearance are becoming increasingly important as social media becomes more widely available. Therefore, this study is aimed to evaluate the incidence of BD and investigate gender and educational level to determine whether these sociodemographics influence BD individuals in Owerri. The findings of this study fill the knowledge gap in this area by providing empirical information on the sociodemographic characteristics of BD victims in Owerri society. This will help in the early identification of these predictive factors and lead to the development of suitable intervention plans for young adults with BD.

REVIEW OF RELATED LITERATURE

Sociocultural theory provides a framework for this study because it emphasizes the role of societal and cultural influences on individual behaviour and development. In disciplines such as psychology, the term "sociocultural perspective" is used to describe awareness of circumstances surrounding individuals and how their behaviours are affected specifically by their surroundings and social and cultural factors. According to Sanderson (2010), the sociocultural perspective is a perspective that describes people's behaviour and mental processes as shaped in part by their social and/or cultural contact. The sociocultural viewpoint is a vast yet important part of who we are. Every aspect of our everyday life is affected by it. This idea informs some of the ways in which we relate to, interact with,

comprehend, and deal with one another. Spiritual, mental, physical, emotional and physiological factors are all influenced by factors studied by sociocultural perspective theory.

Sociocultural theories on the development of BD place a strong emphasis on the social history of those who have BD (Ahmadpanah et al., 2020; Morton et al., 2020). According to this perspective, gender and educational attainment can play significant roles in predicting BD through various sociocultural mechanisms.

Gender: Sociocultural theory highlights how gender norms and expectations shape individuals' self-perception and body image. In many cultures, there are distinct and often unrealistic standards for male and female bodies. For example, women may face pressure to achieve a slim, toned physique, whereas men may be encouraged to attain a muscular build. These societal standards can lead to increased body dissatisfaction and contribute to the development of BDD, especially in individuals who feel that they do not meet these idealized images.

Educational Attainment: Education can influence body image and mental health in several ways. Higher educational attainment often correlates with greater exposure to information about health and wellness, which can impact body image perceptions. However, it can also lead to heightened awareness of and sensitivity to societal standards of beauty, potentially exacerbating body dissatisfaction. Furthermore, educational attainment often intersects with socioeconomic status, which can influence access to resources and support systems for mental health issues.

In summary, sociocultural theory suggests that gender norms and educational attainment can impact body image through societal expectations and pressures. Gendered beauty standards and the effects of educational experiences on body perception can both contribute to the risk of developing BDD.

Therefore, it is pertinent for clinicians to consider gender and educational attainment when dealing with individuals with BD as these factors may influence the presentation, experience and management of the disorder.

Murshidi et al., (2024) investigated the prevalence of body dysmorphic disorder among Jordanian adults with dermatologic and cosmetic concerns in 1500 patients with an average age of 29.3 (±14.8) years and a BMI of 24.8 ± 5.3 kg/m². All participants completed the Dysmorphic Concerns Questionnaire (DCQ), Perceived Stress Scale, Patient Health Questionnaire-2 and General Anxiety Disorder Assessment tool-2. Binary logistic regression models were used to identify predictors of BD at the following cut-off values: 9, 11, 14 and 17. The sociodemographic variables assessed included sex and educational level and the result revealed that at a cut-off value of 9, the predictors of BDD included sex (OR: 1.93; 95% Cl:1.36-2.72) and educational level (OR: 2.06; 95% Cl:1.07-3.99) among others.

Sindi et al., (2023) carried out a descriptive cross-sectional study aimed at exploring the prevalence of BDD among the general population in Makkah, Saudi Arabia. They used an electronic Arabic-based self-report questionnaire and their study included a total of 392 participants aged 18 and 27 years selected via convenience sampling technique. The BDD population had an equal gender ratio and the most common educational level was a bachelor or post-graduate degree (50%), followed by a high school certificate or below (46.4%). The

result of the study concluded that there is no significant association between the BDD group or non-BDD group in age, obesity and gender. Brennan et al., (2023) employed a qualitative approach to study lived experience of BDD using 12 BDD participants (7 females and 5 males) age ranged from 19 to 64 years in Australia. In-depth semi-structured interviews were conducted aiming to understand their subjective experiences of the disorder. The inclusion criteria included participants with other psychological comorbidities and excluded people with neurological disorders, current alcohol or drug abuse requiring clinical attention and a current or lifetime psychotic disorder. Data was analysed using Interpretative Phenomenological Analysis (IPA). The participants were highly educated with an average total number of years of education of 16.54 (SD = 3.83), and the majority holding higher education qualifications. The results identified three superordinate themes; consumed by the disorder, the flawed self, and intolerance of uncertainty about appearance and validated the seriousness and debilitating nature of BDD among these highly educated populations.

Saab et al., (2023) in their study on the prevalence of BDD and its association with mental health status, religiosity, eating disorder risk and self-esteem among Lebanese University Students, investigated the association between BDD and the characteristics of the study sample. The total number of students employed was 6448 of which 414 (6.4%) were diagnosed with BDD. The overall mean score for the sample was 20.85 (SD=3.81) years old. The findings of the study showed that BDD was significantly associated with university level of education with p-value <0.005. The result also showed that gender was not statistically associated with BDD (p-value <0.25). The study underscores the importance of early detection of BDD. Hakim et al., (2021) carried out a study on the associations of body dysmorphic disorder with anxiety, depression and stress among university students in Jeddah, KSA. They validated a questionnaire with items on sociodemographic characteristics and body dysmorphic disorder as well as the depression, anxiety and stress scale and distributed it to 1,112 students. The results revealed that compared with male sex, female sex was significantly associated with anxiety, a symptom of BD and concluded that gender differences exist in BD. Akinboro et al., (2019) carried out a study aimed at evaluating the prevalence of BDD and symptoms of anxiety/depression and determine their sociodemographic and clinical correlates in 114 adults with various skin disorders with a mean age of 37.70 ± 17.47 years. Data was collected using the English version of the Body Dysmorphic Disorder Modification of the Yale-Brown Obsessive-Compulsive Scale (BDD-YBOCS). The sociodemographic parameters documented included education. Data was analysed using chi-square statistics, student t-test, Mann-Whitney U statistics and regression analysis via SPSS version 18. The result of the analysis on the sociodemographic characteristics showed that there was no significant difference in the educational attainment of the participants with or without BDD.

The theory and works reviewed in this study indicate that demographic variables such as gender and educational attainment are associated with BD. Thus, people especially young educated adults are prone to or vulnerable to developing BD. Most of the works in this area show that BD has been described extensively as relatively common yet under-recognized in Western countries, but rarely in Africa and a few in Nigeria, as at the period of this current study. Some studied BD in association with other variables, used different age range and same or both genders. Some studied BD among only university students, some compared BD with other co-morbid disorders. Others used different instruments and statistical analyses to collect and analyse data. No study has been conducted on the associations of BD with sociodemographic factors to the best of knowledge. Thus, the aim of the current study is to

investigate gender and educational level to determine whether they predict the incidence of BD among young adults. This present study will differ from the other studies reviewed in this work because, the location will be the three LGAs in Owerri, Imo State, participants will be both males and females between the ages of 18-25 years, participants will be young adults who has either university education, senior secondary school education or no formal education. This study is therefore relevant to the existing knowledge on BD, as it will provide lacking and peculiar information about BD in Nigeria especially. It will create awareness among Nigerian healthcare professionals, both those practicing and in the educational sector, of the manifestations of BD across genders and educational levels especially among those within 18-25 years of age and allow them to design more effective, targeted interventions and treatment plans. This will help these professionals better navigate cultural sensitivities and address body image issues in a culturally appropriate manner, thus fostering more trust and engagement in the treatment process. It will also help in developing preventative strategies and educational programs aimed at reducing the incidents of BD amongst these vulnerable groups.

Purpose of the Study

1) To investigate whether gender predicts the incidence of BD among young adults in Owerri
2) To ascertain whether educational level would predict the incidence of BD among young adults in Owerri
3) To ascertain whether gender and educational level together significantly predict the incidence of BD among young adults in Owerri.

Hypotheses

1) Gender will significantly predict the incidence of BD among young adults in Owerri
2) Educational Level will significantly predict the incidence of BD among young adults in Owerri.
3) Together, gender and educational level will significantly predict the incidence of BD among young adults in Owerri

METHOD

Participants

Nine hundred and fourteen (914) participants (447 males and 467 females), selected through cluster sampling and random sampling from Owerri geographical location was used for this study. The respondents were aged 18-25 years with a mean age of 20.77 years and a standard deviation of 2.18. Participants who were unmarried, presented the symptoms of BD and were able to read and understand were included while those who were hospitalized and diagnosed with an eating disorder; anorexia nervosa or bulimia nervosa were excluded.

Instruments

One instrument; the Body Dysmorphia Questionnaire (BDQ), was used for data collection while gender and educational level were factored under the demographic section of the

questionnaire. Gender in this study refers to male and female whereas the educational levels used were the senior secondary school level, tertiary education level and no formal education.

A pilot study was conducted to revalidate and modify the instrument and the study reported an inter-item reliability index of .86, a concurrent validity index of .48 and a norm of 2.18 for both genders; a score equal to or greater than the norm is equal to the establishment of the BD criteria and thus will be considered a positive BDD-screening.

Using cluster sampling technique, respondents were selected from the three LGAs in the location under study while the participants were drawn from three educational levels (tertiary education, senior secondary school education and no formal education backgrounds) via random sampling technique - questionnaires were distributed to every 2nd person from the population of interest. Out of the 1050 questionnaires distributed via random sampling technique to those who satisfied the inclusion criteria and were willing to participate, 914 were returned completely and accurately filled and were thus used for data analysis. Ethical considerations such as debriefing, informed consent, confidentiality, non-maleficience and beneficence were observed.

Design and Statistics

This study employed a survey research design and descriptive statistics was also used to describe the participants. Regression analysis was used to test for prediction of the criterion variable (BD) using the predictor variables (gender and educational level). All analyses were carried out via the Statistical Package for the Social Sciences Software (SPSS Version 21.0).

RESULT

Table I: Summary Table Showing the Frequency and Percentage of Participants used for the Study

			N	Percent (%)
Factor	Gender	Male	447	48.9
		Female	467	51.1
		Total	914	100.0
Dependent Variable	Educational Level	Senior secondary school	267	29.2
		Tertiary education	527	57.7
		No formal education	120	13.1
		Total	914	100.0
	Body Dysmorphia			
		Absent	400	43.8
		Present	514	56.5
		Total	914	100.0

Table I above shows that most of the participants were females 467 (51.1%), 527 (57.7%) were with a tertiary educational level and 514 (56.5%) had Body Dysmorphia present.

Table II: Summary of Regression Analysis Showing the Predictive Strength of Gender and Educational Level and their Joint Impact on BD

Model	Beta	R	R²	R² Change	T	Sig
Gender	.08				2.37	.02
		.12	.01	.01		
Educational Level	.09				2.82	.01

[F (2,911) = 6.65, p <.05]

The results presented in Table II above show that a significant regression was found [B = .08, t (2,911) = 2.37, p <0.5] between gender and BD, indicating that gender explained approximately .08 of the variance in BD. Thus, the first alternate hypothesis of a statistically significant prediction is accepted. Educational level [B = .09, t (2,911) = 2.82, p <.05], was found to predict the incidence of BD as the higher the educational level score is, the higher the BD condition and for every unit of increase in the score of educational attainment, there is a .09 increase in the condition of BD. Therefore, the second alternate hypothesis that educational level will predict BD is accepted. Finally, the overall fit as indicated by the R² value in the table above, shows that 1% of the variance in the BD condition is accounted for by the predictor variables, meaning that gender and educational level explained a significant proportion of the variation in predicting the BD condition [R² = .01, F (2,911) = 6.65, p <.05]. Therefore, the third alternate hypothesis that gender and educational level will predict the incidence of BD is accepted. The summary of the results show that gender and educational level are connected with BD among young adults in Owerri.

DISCUSSION

This study revealed that sex and educational level independently and together, predict the incidence of BD among young adults in Owerri. The first finding that gender will predict the incidence of BD among young adults in Owerri was supported by the findings of Hakim et al., (2021) on the association of body dysmorphic disorder with anxiety, depression and stress. They validated a questionnaire with items on socio-demographic characteristics and body dysmorphic disorder as well as the depression, anxiety and stress scale and distributed it to 1,112 university students in Jeddah, KSA. Their study concluded that among the socio-demographic factors under study, gender differences existed in BD. On the other hand, the finding of this current study was contrary to that of Sindi, et al., (2023) on the prevalence of BDD among the general population in Makkah, Saudi Arabia using a total of 392 participants aged 18 and 27 years. They used an electronic Arabic-based self-report questionnaire and the result of the study concluded that there was no significant association between the BDD group and gender. The finding could be attributed to societal and media influences on body type: our societal standards and media portrayals of ideal body types often differ for males and females. Women may face more pressure to conform to certain beauty standards, leading to higher incidences of BD related to appearance, whereas men may struggle with BD related to muscularity influenced by cultural ideals of masculinity. Gender-specific socialization practices often emphasize different aspects of body image. Females might be encouraged to focus on achieving a slim physique whereas their counterparts may be encouraged to build muscles. These varying social norms could lead to distinct patterns of BD, reflecting the specific pressures and expectations placed on each gender.

The second finding that educational level predicts the incidence of BD among young adults in Owerri is supported by Brennan, et al.'s (2023)'s findings on lived experience of BDD using 7 females and 5 males with BDD age ranged from 19 to 64 years in Australia. The participants were highly educated with an average total number of years of education of 16.54 (SD = 3.83), and the majority holding higher education qualifications. Data was gathered via in-depth semi-structured interviews and analysed using Interpretative Phenomenological Analysis (IPA). The results validated the seriousness and debilitating nature of BDD among these highly educated populations. Saab et al.'s (2023)'s findings on the prevalence of BDD and its association with mental health status, religiosity, eating disorder risk and self-esteem is also in line with that of this current study. They investigated the association between BDD and the characteristics of the study sample using 6448 Lebanese university students of which 414 (6.4%) were diagnosed with BDD. The overall mean score for the sample was 20.85 (SD=3.81) years old and the findings of the study showed that BDD was significantly associated with university level of education with p-value <0.005. On the other hand, the findings of Akinboro et al.'s (2019)'s study on the prevalence of BDD and symptoms of anxiety/depression and their sociodemographic and clinical correlates did not support the findings of this current study. They used 114 adults with various skin disorders and the result of the analysis on the sociodemographic characteristics revealed that educational attainment is not associated with BDD. One credible reason for the current findings of this study is self-perception and achievement pressure. Individuals with higher educational attainment are likely to experience heightened self-perception and pressure to meet high personal and professional standards. The drive for this achievement could translate into increased scrutiny and dissatisfaction with one's body, as they may internalize societal standards of success and attractiveness more intensely. Another believable reason is the access to resources and knowledge. Higher educational attainment often correlates with greater access to resources and information about health and body image. Individuals with more education may have better access to psychological support and understanding of BD, which could both reduce and exacerbate body image issues depending on the quality and nature of the information and support they receive.

The third finding showed that gender and educational level together predicted BD among young adults in Owerri. The finding was in line with Murshidi, et al.'s (2024)'s work that investigated the prevalence of body dysmorphic disorder in 1500 Jordanian adults patients with dermatologic and cosmetic concerns with an average age of 29.3 (±14.8) years and a BMI of 24.8 ± 5.3 kg/m². They also assessed sociodemographic variables to ascertain their associations with BDD. Binary logistic regression models were used to identify predictors of BD via the following cut-off values: 9, 11, 14 and 17 and the result revealed that at a cut-off value of 9, the predictors of BDD included gender (OR: 1.93; 95% Cl: 1.36-2.72) and educational level (OR: 2.06; 95% Cl: 1.07-3.99) among others. The reason for this recent finding is associated with exposure to societal norms and pressures: sociodemographic factors such as gender, cultural background and educational attainment, shape exposure to societal and professional norms and beauty standards. For example, males and females may face different societal and professional pressures regarding their body image; influencing their susceptibility to BD. These norms can dictate ideal body types which may differ by sociodemographic factors and could influence how individuals perceive and feel about their bodies.

Implications of the Findings

The findings of this study are crucial for clinical practice and future research especially on the demographic characteristics related to the incidence of BD. One implication for public health interventions is a targeted awareness campaign via gender-specific messaging and educational considerations. Since gender influences incidence of BD, public health campaigns could be tailored to address the specific concerns of different genders. For example, campaigns aimed at women might focus on media portrayals and societal pressures related to physical appearance, whereas those for men might address issues related to muscularity and body image. Again, these campaigns should also consider the educational background of the target audience - for lower educational attainment groups, simpler, more accessible messaging might be needed, whereas more detailed information could be provided for higher educational attainment groups. Also, introducing programs in schools that educate students about body image, mental health and self-esteem with emphasis on building resilience and critical thinking about media representations can be effective in mitigating the development of BD. Community based outreaches could help raise awareness and understanding of BD among various educational levels, potentially reducing stigma and encouraging early intervention. Ensuring that mental health resources are accessible to all educational levels is crucial. This might involve creating low-cost or free mental health services and resources for those with lower educational attainment. Leveraging technology to provide online resources and support could help reach individuals who might have limited access to traditional mental health services, especially in remote or underserved areas.

For clinical practice, the implication of the findings of this study is gender-sensitive clinical approaches and tailored interventions. Clinicians should be trained to recognize and address BD with sensitivity to gender-specific concerns and tailor psychological interventions to address the specific needs of different genders and educational backgrounds. Customized communication based on educational level and increased accessibility to mental health services regardless of educational background is crucial. This will definitely help to inhibit or prevent the development of BD and other conditions similar to BD e.g. body image concerns and facilitate early intervention to mitigate the disabilities associated with the condition.

Conclusion

The incidence of BD among young adults can be influenced by a range of factors, including sex and educational level. Understanding these factors will help in addressing and mitigating BD, highlighting the need for targeted support and interventions that consider both individual and contextual influences.

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