

# Age Moderates the Association of Body Image Dissatisfaction and Depression in African Women

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## ABSTRACT

Depression is a plague that is decimating humanity. Some risk factors have been implicated in depression, but little is known about the moderating role of Age in the association between body image dissatisfaction and depression. This cross-sectional study examined 220 African women, 18 to 71 years. Data were collected using the Body Shape Questionnaire and the Patient Health Questionnaire. Results showed that body image dissatisfaction positively predicted depression. Age negatively predicted depression. Age moderated the association between body image dissatisfaction and depression. According to the findings of this study, dissatisfaction with one's body image is a risk factor that can increase depression in women, and the tendency for body image dissatisfaction to increase the likelihood of depression is stronger for younger women. Interventions could target protective factors that increase body image satisfaction, especially for younger women.

## 1. Introduction

Depression is one of the most common mental health problems experienced by people in society today. Depression is a mental health condition that affects people's functionality. It is a mental health disorder characterized by profound and persistent sadness and despair and a loss of interest in normally pleasurable activities. All these symptoms affect women's ability to perform their various roles in society (World Health Organization [WHO], 2022). Globally, it is estimated that 10% of adults suffer from depression, which is also a leading cause of disability worldwide (WHO, 2022).

Depression is a major contributor to the overall global burden of disease and affects women more. Women are known to play critical roles in the family, even caring for other members of the family. All of these become difficult given an underlying mental condition. Women who have depression-related issues do not perform optimally and have impaired functioning compared to other women without depression-related issues (WHO, 2022).

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Although depression affects both men and women, women are more likely than men to be diagnosed and to experience more severe symptoms, according to the WHO (2022). Depression has gained prominence among the various mental health conditions that people can experience throughout their lives because of its widespread impact and its association with both psychological and physical health outcomes (Baker & Kirk-Wade, 2023). Women suffer from depression at a rate that is about twice as high as that of men. This is due to a complex interaction between biological, psychological, and sociocultural factors (Han et al., 2023; Simbar et al., 2020).

Maternal mental health is a significant risk factor for depression in women, particularly in low- and middle-income nations. Prado et al. (2021) indicated that depression in mothers may have adverse effects on their children's growth and development - even affecting future generations. Poor emotional, physical, and cognitive outcomes in children, especially in the early years of life, have been associated with maternal depression (Prado et al., 2021). These demonstrate how gender-specific factors, like the psychological burden of motherhood can make women more susceptible to depression.

Body image is important for many women. Body image dissatisfaction is a risk factor for developing depression (Duchesne et al., 2017; Han et al., 2023; Shagar et al., 2017; Soares-Filho et al., 2020). Body image dissatisfaction results from displeasure about one's physical appearance resulting from the mental image one has of an ideal body structure. As the world is evolving, many people are exposed to information on the internet and in real life on how the ideal body should look, if one's body does not measure up, it could precipitate depression.

It is important to consider psychological theories that explain how people process information about their appearance and compare themselves against societal standards in order to understand the association between depression and body image dissatisfaction. Social comparison theory, which holds that people assess themselves by comparing their qualities and skills with those of others, provides one theoretical explanation for body image dissatisfaction (Festinger, 1954). Women may feel dissatisfied with their own appearance when they compare themselves to idealized media images, which are frequently unattainable. Cognitive biases, particularly those who are obsessed on body size and shape, serve to further reinforce this dissatisfaction. Information that is neutral or unclear may be interpreted by these people in a way that supports their negative opinions about their looks.

Women, in particular, frequently judge their bodies in comparison to other women who embody socially constructed standards of beauty. These internalized comparisons, which are influenced by media and societal norms, can heighten susceptibility to depression and promote persistent body dissatisfaction. It's interesting to note that older women might be less likely to make these comparisons, perhaps as a result of increased self-acceptance or less exposure to demands based on looks, which could protect them from dissatisfaction connected to body image.

Equally, Beck's cognitive theory is one psychological explanation for the association between depression and BID. According to Beck et al. (1979), depression results from negative thought patterns. According to their model, people who are depressed frequently display three main cognitive distortions: negative self-schemas, logical errors, and the cognitive triad, which consists of negative views about the self, the world, and the future. For example, a person may have a negative self-perception (I am unattractive), a negative worldview (I cannot meet up with social standards), and a negative future perception (My look will never get better).

This concept explains how depression may be heightened by body image dissatisfaction, especially in women who internalize unattainable beauty standards. It is possible for women to

develop negative thoughts about their physical appearance in their self-schema. These schemas may activate negative thought patterns that heighten susceptibility to depression once they are triggered by stresses like media exposure or social comparison. The association between BID and depressive symptoms may be strengthened in the context of this study by the possibility that younger African women are more vulnerable to these cognitive distortions as a result of increased exposure to appearance-based social pressures orchestrated by social media.

Due to constant pressure to meet contemporary beauty standards, many women are turning to increasingly common ways of changing their look. Nowadays, more people are seeking procedures including skin bleaching, liposuction, and Brazilian Butt Lifts (BBL), frequently as a result of media portrayals of the "ideal" figure. The desire to attain body forms that are encouraged by societal norms has also led to an increase in the use of weight-gain and weight-loss beverages. The impact of modernization and the media, which have altered societal standards of beauty through sectors like fashion, advertising, and digital entertainment, is strongly linked to these developments. Despite the fact that these ideals are frequently unattainable, they dominate online spaces, making many women dissatisfied with the way they look (Azhaar et al., 2020).

Up to 87.9% of people thought about getting cosmetic surgery as a result of social media exposure, according to a recent systematic study, with 33–57% saying that internet information directly influenced their choices (Felimban et al., 2025). Similarly, regular usage of appearance-focused apps like Instagram and Snapchat was associated with a larger need for cosmetic treatment, especially among users who interact with filters and influencer material, according to a clinical survey carried out in the United States (Boston University, 2024). These results are consistent with a rising global trend in which women's self-image and decisions regarding body modification are shaped by beauty ideals promoted on social media.

The high rate of depression among women worldwide is still drawing attention from recent public health studies. According to a study on perimenopausal women, between 2% and 13% of cases could have both eating problems and depressive symptoms at the same time due to hormonal changes and social pressure to always look young (Stevens, 2024).

Scholars (Afriyie-Adjimi & Nkyi, 2024; Balogun-Mwangi et al., 2023; Olatona et al., 2024; Han et al., 2023; Hanson et al., 2024; Shagar et al., 2017) have examined the link between body image dissatisfaction and depression, and reporting positive correlations.

Likewise, extant literature reports an association between body image dissatisfaction and depression in women (Bolaji & Chukwuma, 2022; Manaf et al., 2016; Mota et al., 2020; Satghare et al., 2019; Simbar et al., 2020). Contrarily, Sorrell (2019) reported no significant association between body image dissatisfaction and depression. However, most of the reported works have focused on adolescents, whereas studies examining adults' body image and depression are scarce.

Depression can also be influenced by demographic factors such as age. Women go through several stages of their lives, such as childhood, adolescence, adulthood, and the elderly stage. A woman's psychological and mental health may be impacted by the psychological, physical, and social variations she experiences throughout these stages (van Dammen et al., 2018). They are more prone to psychiatric illnesses during the reproductive life cycle, when hormonal imbalance, marital issues, pregnancy, childbirth, and postpartum depression are common (van Dammen et al., 2018). Even middle-aged women are not entirely protected. In a 2024 study, social media use among perimenopausal women was found to increase body dissatisfaction and depressive symptoms (Stevens, 2024).

Previous studies have shown that younger women are more likely than older women to experience depression (Grayson & Thomas, 2013; Talukder et al., 2017). However, newer findings suggest a more complex picture. Women in midlife, particularly those between 45 and 55 years, may face higher risks of depression due to hormonal changes and social pressures (Simbar et al., 2020). Body image dissatisfaction is also important across different stages of life. Research has shown that younger women often report higher body dissatisfaction, which makes them more vulnerable to depression, while midlife women may experience depression linked to menopause and changing social roles (Runfola et al., 2023; Haider et al., 2023).

Social attitudes about aging also play a role in women's experiences of body image. Bhatia and Singh (2021) studied women across three age groups and found that older women reported the highest levels of body image concerns, challenging the idea that such issues fade with age. Although they did not find a direct link between age and body image, their results show that cultural beliefs that value youth and attractiveness can negatively affect how women see themselves. This means that women across all ages may continue to struggle with body dissatisfaction, but for different reasons. These pressures may also contribute to emotional difficulties, highlighting the need to study how both biological changes and social expectations combine to influence the relationship between body image dissatisfaction and depression.

A recent study of Omani university students further addresses this complexities. It found that **social media exposure**, rather than age, was the primary factor associated with BID, with **no significant differences between age groups** (Al Riyami et al., 2024). This finding suggests that age might serve more as a **moderator** than as a direct influence in the relationship between BID and depression within your population.

This study addresses a significant gap in the literature by focusing on adult African women, a population often underrepresented in research examining the association between body image dissatisfaction and depression. While prior studies have primarily examined this relationship among Western, Asian, and adolescent samples, there is limited understanding of how these factors operate in adult African populations. By introducing age as a moderating variable, this study not only extends existing knowledge but also provides culturally relevant awareness. The purpose of this study is to examine the moderating role of age in the relationship between body image dissatisfaction and depression in adult African women. Specifically, the study aims to: determine the association between body image dissatisfaction and depression, the relationship between age and depression, whether age moderates the relationship between body image dissatisfaction and depression, such that the association is stronger among younger women and weaker among older women.

It is expected that body image dissatisfaction will be positively associated with depression; age will be negatively associated with depression; and age will moderate the relationship between body image dissatisfaction and depression.

## **2. Methods**

### **2.1 Participants**

Two hundred and twenty women (220) participated in the study. These were drawn from four institutions within a city in Nigeria. They include Federal Neuropsychiatric Hospital, College of Education, a University Teaching Hospital, and the State Secretariat. The participants' ages ranged from 18 to 71 (Mean = 30.04; SD = 9.78). The population comprises of women with a minimum educational qualification of the Senior School Certificate Examinations (SSCE).

## **2.2 Instruments**

Two instruments were used for data collection. They are the Body Shape Questionnaire (BSQ-8) and the Patient Health Questionnaire (PHQ-9).

**Body Shape Questionnaire (BSQ-8):** The Body Shape Questionnaire (BSQ) was used to evaluate body dissatisfaction. This brief version of the BSQ comprises 8 items focusing on feelings of body dissatisfaction and concerns regarding weight and shape. Participants rated their responses on a 6-point scale ranging from "1 = never" to "6 = always", with higher scores indicating greater levels of concern. An illustrative item includes "Have you felt ashamed of your body?" The scale has demonstrated good internal validity (Evans & Dolan, 1993) and satisfactory fit indices among nonclinical populations (Pook et al., 2008).

**Patient Health Questionnaire (PHQ-9):** The Patient Health Questionnaire (PHQ-9) is a nine-item self-report instrument utilized to evaluate the severity of depression (Kroenke et al., 2001). The items are derived from the DSM-IV's diagnostic criteria for major depressive disorder. Participants are asked to self-rate the frequency with which they experienced the specified symptoms of depression over the preceding two weeks on a 4-point Likert-type scale, ranging from 0 = "not at all" to 3 = "nearly every day." Total scores are calculated by summing the scores for each item, resulting in a total score ranging from 0 to 27, with higher scores indicating greater symptom severity. Kroenke et al. (2001) reported satisfactory internal consistency and Cronbach's alpha values of .86 and .89, respectively, in a study involving two distinct patient populations.

## **2.3 Procedure**

The first author approached the participants at different sites where the study was conducted. Each participant completed the items in the scales. Participants were assured of the confidentiality of their responses and that participation in the study was voluntary. The participants provided their consent before responding to the scale items.

## **2.4 Design/Statistics**

The authors used a cross-sectional design to determine the associations between the variables. They also used Hayes' (2018) regression-based PROCESS macro for the Statistical Package for the Social Sciences (SPSS) to establish whether age moderated the relationship between body image dissatisfaction and depression.

## **3. Results**

Table 1 contains the results. The adjusted  $R^2$  for the model was .21. This was significant -  $F(3,216) = 18.92, p < .000$ . Body image dissatisfaction is positively related to depression, effect = .24,  $p < .000$ . Further, age is negatively related with depression, effect = -.21,  $p < .000$ . Furthermore, age moderated the link between body image dissatisfaction and depression, effect = -.02,  $p < .000$ .

Table 1: Hayes Moderation PROCESS Summary for the Moderating Role of Age in the Association between Body Image Dissatisfaction and Depression

	Adj R	df1(df2)	F	Effect	SE	t	LCI	UCI
<b>Model</b>	<b>.21</b>	3(216)	18.92***					
<b>BID*</b>				.24***	.05	5.05	.14	.33
<b>Age</b>				-.21***	.04	-5.22	-.29	-.13
<b>BID X Age</b>				-.02**	.01	-2.92	-.03	-.01

Note: \*\*\*  $P < 0.001$ ; \*\*  $P < 0.01$ ; BID = Body Image Dissatisfaction; SE = Standard Error; LCI = Lower Confidence Interval; UCI = Upper Confidence Interval

Figure 1 shows that when the level of the moderator (age) is high, +1 SD, the value of simple slope is 8.96,  $p > .05$ , body image dissatisfaction did not significantly predict depression. When the level of the moderator is at the mean, simple slope is -2.04,  $p < .000$ , body image dissatisfaction significantly predicted depression. When the level of the moderator is low, -1 SD, the value of simple slope is -8.04,  $p < .000$ , body image dissatisfaction robustly predicted depression.

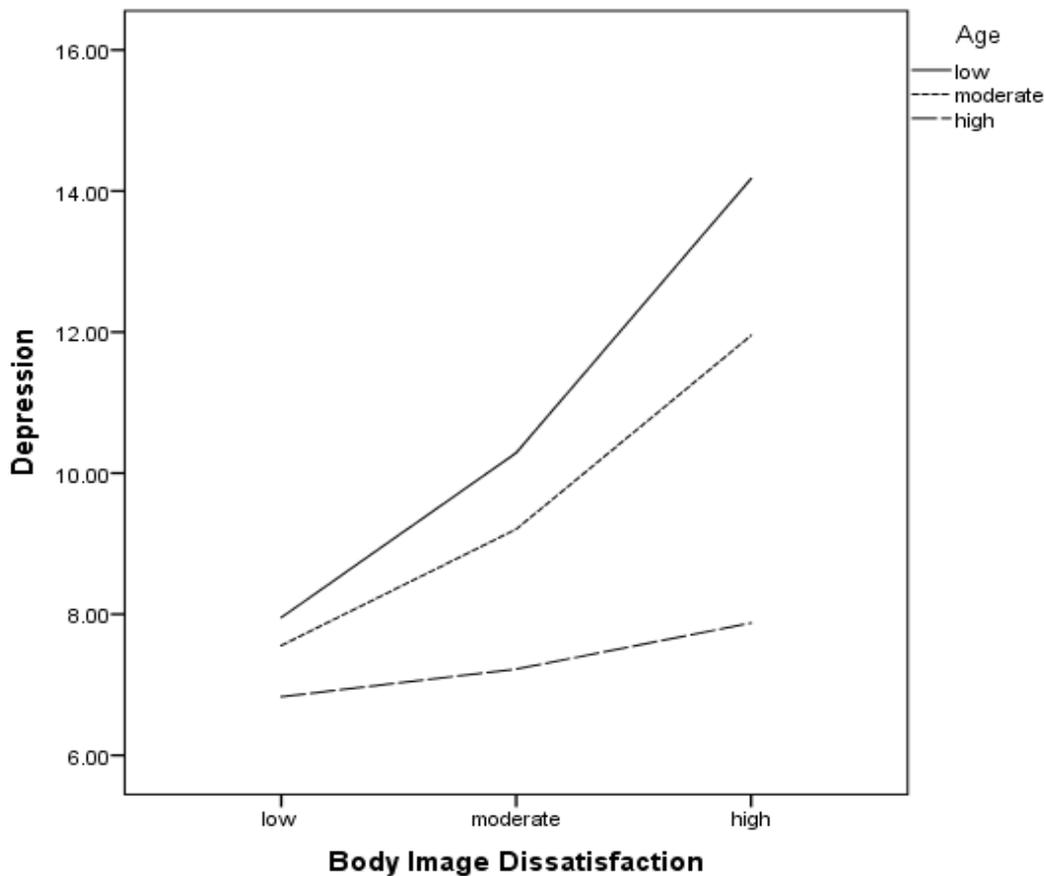


Figure 1: Interaction slope showing the moderating effect of age on body image dissatisfaction and depression

#### 4. Discussion

This study aimed at examining the association between body image dissatisfaction (BID) and depression in African women, and whether age moderates such an association. It was found that dissatisfaction with one's body image was positively linked to depression. This suggests

that as BID increases, depression also increases. This finding resonates with the observations of other researchers (Manaf et al., 2016; Mota et al., 2020; Satghare et al., 2019; Simbar et al., 2020) who found a link between body image dissatisfaction and depression in women, but not Sorrell, 2019, who reported no significant association between body image dissatisfaction and depression.

A woman who is constantly attempting to alter her appearance to fit in is at risk of developing depression. This tendency for body image dissatisfaction to be positively linked with depression suggests that the hallmark of depression is discontent with life. When one is disgruntled with life, in this instance, one's body, it portends unhappiness, sadness, and frustration, which are precursors to depression. This finding supports the cognitive triad (Beck et al., 1979) theory of depression. As a person begins to view an aspect of the self (e.g., one's body) in a negative light, if unabated, it may eventually precipitate depression.

Age is a fundamental factor that is associated with depression, with bias towards younger women being at risk of developing depression relative to their older counterparts. The reason could be sociocultural. The importance of sociocultural phenomena in understanding African women's mental health has increased (Yalew et al., 2023; Adewuya & Ologun, 2020). Younger women experience considerable stress. If she is not worried about securing an adequate partner or spouse and other vicissitudes of an unsettled relationship, she may be grappling with pregnancy, childbearing, and child rearing, especially in an environment where domestic chores are almost exclusively the burden of women, unlike older women who may have grown up children who may likely assist in domestic chores and equally give needed additional social support.

Furthermore, the positive association between body image dissatisfaction and depression is moderated by age. In other words, the link between body image dissatisfaction and depressive symptoms is stronger among younger women than older women. This suggests that age can either intensify or lessen the psychological effects of body dissatisfaction. Recent studies support this finding, showing that younger women are more likely to internalize societal beauty standards and experience emotional distress when those standards are unmet (Stevens, 2024). In contrast, older women may show greater resilience, possibly due to increased body acceptance and reduced exposure to appearance-based pressures (Iqbal et al., 2023; Runfola et al., 2023). These age-related patterns help explain why body image dissatisfaction is more psychologically damaging for younger women.

In this research report, younger age increased the likelihood of developing depression. As already indicated, younger women undergo lots of stress accruing from either the unsettled life of singlehood or the early stages of married life, where they carry a great domestic burden, in many cases with little support. When this phenomenon is yoked with societal expectations of the woman, especially at a younger age, to look good, body image and looks become larger-than-life issues for many young women, thereby aggravating the challenge of depression, unlike older women who are more or less the boss in the home as well as in the larger community, where their views are even used to control younger women—an extra burden for younger women.

Young women tend to be more depressed than older women. Younger women experience more pressure from the media regarding achieving appearance ideals and tend to feel more dissatisfied with their body image than older women. In counseling/psychotherapy, when working with depressed women, it is important to consider their age, with a focus on young women. For young women, it is important to pay attention to whether they also struggle with body image concerns and how they perceive pressures from the media, society, etc. regarding

the pursuit of body goals. Facilitating the women toward self-acceptance and inwardness in terms of self-assessment of one's worth can be considered a milestone in the therapy contract.

According to the findings of this study, more research needs to be conducted on age and body image dissatisfaction among women to understand other factors that could mediate the relationship between body image and depression. The area of research on body image dissatisfaction among women needs to be robustly studied. The cognitive theory of depression is based on the assumption that negative vibes one receives from the environment, when internalized, may trigger depression. It may also be worthwhile investigating whether individuals with preexisting depression are predisposed to finding fault in their body. One of the limitations of this study is that the participants were drawn exclusively from one country, largely due to accessibility and resource considerations. Future research may consider including women from other countries across the world to allow for broader comparisons and stronger generalizability. The sample also excluded men from the study. However, there is an emerging trend in body image research suggesting that men may also report body image dissatisfaction (Grogan, 2021; Han et al., 2023; Quittkat et al., 2019). It may be necessary to include men in subsequent investigations of body image dissatisfaction vis-à-vis depression.

Given the limitations highlighted above, the researchers suggest that future studies on depression should consider a larger sample size than only women and extend the scope of the study to include men for cross-gender comparisons as well as other cultures for cross-cultural comparisons. Additionally, future studies with longitudinal designs could be conducted to follow up on non-depressed girls at a very young age to verify whether depression is a precipitator of body image dissatisfaction or otherwise. In addition, more protective factors such as spiritual intelligence, spirituality, and assertiveness are suggested for further study to better understand the body image dissatisfaction vs. depression nexus as part of a holistic inquiry into the psychological health of women.

In conclusion, according to the findings of this study, dissatisfaction with one's body image is a risk factor associated with increased depression in women, and this risk is exacerbated for younger women. Interventions should target protective factors that increase body image satisfaction among women, especially young women. Mental health practitioners could design preventive measures for women who are unhappy with their bodies.

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