

Predictive relationship between body esteem and interpersonal competence among university students

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Abstract

Background and Study Aim Body esteem refers to an individual's self-perception and evaluation of their physical appearance, often linked to emotional and social well-being. Interpersonal confidence, in turn, reflects one's perceived ability to communicate and interact effectively in social settings. Although various psychological factors have been studied in relation to interpersonal functioning, their relative effectiveness in promoting social confidence remains a matter of practical interest. This study examined the influence of body esteem on interpersonal confidence among Filipino university students within a collectivist sociocultural framework.

Material and Methods A quantitative, cross-sectional design was employed. Data were collected from 341 university students (234 males and 107 females) enrolled in a state university in Region III, Philippines, through non-probability convenience sampling. Two standardized self-report instruments were used: the Body Esteem Scale-Revised (BES-R) and the Interpersonal Competence Questionnaire (ICQ). Both tools were linguistically adapted and independently validated for male and female respondents using confirmatory factor analysis. Data collection was conducted online via a secure survey platform over a five-day period.

Results Multiple linear regression analyses revealed that, among males, sexual attractiveness significantly predicted interpersonal confidence ($\beta = 0.278$, $t = 3.56$, $p < 0.001$), accounting for 13.2% of the variance [Adjusted $R^2 = 0.132$, $F(3,230) = 12.86$, $p < 0.001$]. Among females, upper body strength was a positive predictor ($\beta = 1.094$, $t = 7.56$, $p < 0.001$), while sexual attractiveness was a negative predictor ($\beta = -0.326$, $t = -3.14$, $p = 0.002$), explaining 70.7% of the variance [Adjusted $R^2 = 0.707$, $F(3,103) = 86.08$, $p < 0.001$]. These findings indicate that body-related perceptions contribute differently to interpersonal confidence across sexes. For male students, confidence appears to be associated primarily with perceived attractiveness. In contrast, for female students, a stronger sense of physical capability enhances confidence, while emphasis on sexualized appearance may be detrimental. All regression assumptions were met, including normality, linearity, homoscedasticity, and independence (Durbin-Watson = 2.019–2.140).

Conclusions Body esteem emerged as a significant predictor of interpersonal confidence among university students, with distinct patterns observed between sexes. The findings highlight the need for gender-sensitive wellness programs that emphasize body functionality, self-acceptance, and social confidence within higher education contexts.

Keywords: body esteem, interpersonal confidence, Filipino context, gender differences

Introduction

University students navigate a critical period of personal development marked by academic demands, social transitions, and identity formation. During this phase, self-perception and body-related attitudes often become more salient, influencing a wide range of psychological and interpersonal outcomes. Body-related self-evaluations can affect how individuals interact with peers, perceive acceptance, and develop social confidence, especially in culturally structured environments where appearance and social harmony are emphasized.

Body esteem refers to an individual's self-evaluation of their body or appearance,

encompassing cognitive and emotional attitudes that may be positive or negative. It is widely recognized as a multidimensional construct. It is commonly assessed using validated instruments such as the Body Esteem Scale [BES] and the Body Esteem Scale for Adolescents and Adults [BESAA], which capture appearance, weight satisfaction, and perceived social evaluation [1, 2, 3, 4].

Within psychology and mental health, body esteem is closely linked to self-esteem, body image, and overall well-being. Low body esteem is associated with depression, anxiety, eating pathology, and reduced quality of life, particularly during adolescence and young adulthood [5, 6, 7, 8]. Sociocultural factors such as social media exposure, cultural norms, and gendered expectations further shape body esteem. Women and adolescents often

experience heightened body dissatisfaction due to prevailing beauty standards, while men increasingly face pressure to achieve muscularity and leanness [6, 8, 9]. In health and physical education, physical activity, body composition, and health behaviors are consistently associated with body esteem. Higher activity levels and healthier body composition are linked to more positive body perceptions [7, 10, 11]. Well-documented gender and age differences indicate that women's body esteem typically centers on appearance and weight. In contrast, men's body esteem is more often related to attractiveness, muscularity, and fitness. The link between body esteem and self-esteem also tends to be stronger among women [4, 9, 12]. Adolescence and young adulthood are critical developmental stages during which body esteem fluctuates in response to identity formation, social comparison, and peer influence [1, 5, 13]. Collectively, these findings highlight body esteem as a complex construct shaped by psychological, sociocultural, and biological factors.

Interpersonal confidence, by contrast, reflects one's perceived capability to navigate social situations and communicate effectively. Unlike global self-confidence, situational self-confidence is context-dependent. It emphasizes trust in one's own ability, not in others, to engage appropriately in social exchanges [14]. Its core dimensions include performance confidence, flexibility, listening skills, tolerance of failure, collaboration motivation, and presence. These are typically measured using the Interpersonal Confidence Questionnaire (ICQ) [14]. Conceptually, interpersonal confidence differs from related constructs such as self-confidence and interpersonal trust [15, 16, 17, 18]. Functionally, it is crucial for effective communication, relationship-building, and collaboration. It enables individuals to engage socially, adapt to their surroundings, and maintain productive interactions. Training approaches such as improvisation-based exercises have been shown to enhance interpersonal confidence. They do so by strengthening listening skills, fostering flexibility, and promoting comfort with mistakes. Conversely, the absence of such experiences may impair communication, even when social skills are present [14, 19]. The ICQ's six-subscale model offers a comprehensive framework for examining social competence and adaptability.

The relationship between body esteem and interpersonal confidence has been widely examined among adolescents and young adults. Evidence consistently shows that body esteem predicts interpersonal confidence. However, the relationship is modest and often mediated by self-esteem, body image satisfaction, and psychological well-being [20, 21, 22, 23]. Higher body esteem is associated with greater social assurance, improved communication, and more satisfying relationships [24, 25, 26, 27]. Still, the direct effect tends to be small to moderate

[20, 22, 23]. Self-esteem consistently emerges as the strongest mediator, linking body esteem to interpersonal outcomes such as social self-efficacy and relationship satisfaction [11, 21, 22, 28].

Psychological well-being and body image satisfaction also serve as mediating pathways [5, 28]. Longitudinal evidence supports a reciprocal relationship in which improvements in body esteem strengthen interpersonal confidence. In turn, positive interpersonal experiences reinforce body esteem [21, 22, 23, 29].

The direct path often becomes non-significant when controlling for mediators [20, 30, 31]. This suggests that body esteem operates within a broader psychosocial system. Moderating factors such as gender, age, and cultural background further influence the relationship. Stronger effects are typically observed among women, adolescents, and populations in appearance-focused societies [5, 31, 32].

Overall, while body esteem is a meaningful predictor of interpersonal confidence, its effects tend to be indirect and shaped by interconnected psychological and sociocultural processes [5, 22, 23, 32]. Empirical evidence among Filipino emerging adults shows that body esteem correlates with mental well-being and quality of life [33, 34]. These factors promote smoother interpersonal relations rather than overt self-assertion. Similarly, subjective physical activity and perceived fitness predicted interpersonal competence among Filipino males but not females. This pattern reflects gendered norms of modesty and restraint [35].

Two central Filipino values, *pakikipagkapwa* and *hiya*, offer a culturally grounded explanation for this difference. *Pakikipagkapwa*, or shared identity, frames interpersonal relations as acts of empathy, compassion, and social connectedness [36, 37, 38, 39, 40]. It situates self-worth within collective belonging rather than individual appearance or status. Meanwhile, *hiya*, a sense of social propriety and respect for others' feelings, regulates behavior to maintain harmony and avoid conflict [41, 42, 43]. While *pakikipagkapwa* encourages engagement and mutual care, *hiya* moderates self-expression to prevent offense or shame. Together, these values suggest that in the Filipino context, body esteem enhances interpersonal competence not through assertiveness but through relational sensitivity and harmonious social interaction [36, 37, 41, 42]. Thus, a culturally grounded Filipino theory would conceptualize body esteem as a relational resource. It supports social harmony, empathy, and collective well-being, rather than serving as a driver of individual confidence alone.

Analysis of research findings has shown that body esteem plays a meaningful but often indirect role in shaping interpersonal confidence, operating through mediating and moderating psychological

and cultural variables. Scholars emphasize that interpersonal competence is not solely a product of individual traits but is shaped by gender norms, social expectations, and contextual meanings of the body. While theoretical models increasingly recognize these complexities, important questions remain about how culturally specific values influence the psychological mechanisms connecting body-related self-perception and social functioning. This gap continues to limit the application of existing frameworks to diverse populations and underscores the need to explore these relationships in culturally grounded contexts.

In addition, research has focused largely on Western populations, emphasizing individualism and self-concept, with limited attention to how these dynamics manifest in collectivist cultures such as the Philippines. In this context, *pakikipagkapwa* (shared identity) and *hiya* (social modesty) strongly shape self-perception and social behavior. These cultural values may influence body esteem through appearance norms and familial expectations, and interpersonal confidence through relational harmony and social sensitivity. Consequently, the predictive mechanisms between body esteem and interpersonal confidence may differ in magnitude or expression within Filipino sociocultural contexts. However, empirical evidence remains limited. Moreover, Filipino university students, a group undergoing rapid identity development, high academic demands, and intensive social media exposure, have been understudied despite their vulnerability to shifts in both self-perception and social functioning. Their unique developmental and cultural circumstances present a critical context for examining how body esteem influences interpersonal confidence in ways that global models may not fully capture. Therefore, this study examines the influence of body esteem on interpersonal confidence among Filipino university students within a collectivist sociocultural framework.

Materials and Methods

Participants

The study population consisted of students enrolled at a state university in Region III, Philippines, during the first semester of the 2025–2026 academic year. Clear inclusion, exclusion, and withdrawal criteria were applied to ensure methodological rigor and the appropriateness of the sample. The inclusion criteria required participants to be officially enrolled university students, taking courses mandated by their academic programs, and without a history of formal athletic training. This helped ensure that the sample reflected typical student characteristics. The exclusion criteria ruled out students from other campuses of the same university and those enrolled in elective or non-

required subjects, maintaining sample consistency and alignment with the study focus. Participants retained the right to withdraw from the study at any stage without penalty. This protected participant autonomy and upheld ethical standards.

Table 1 presents the demographic profile of the participants, including age, height, and weight across male, female, and total groups. On average, male students were taller and heavier than female students, while age was relatively consistent across groups.

Table 1. Characteristics of the respondents (Mean $\pm$ SD)

Variable (Mean $\pm$ SD)	Female	Male	All
Age (years)	18.68 $\pm$ 1.50	18.59 $\pm$ 1.08	18.62 $\pm$ 1.23
Height (m)	1.58 $\pm$ 0.06	1.70 $\pm$ 0.064	1.66 $\pm$ 0.08
Weight (kg)	51.71 $\pm$ 15.03	64.78 $\pm$ 19.67	60.68 $\pm$ 19.30

Research Design

This study employed a quantitative, cross-sectional design to examine the relationship between body esteem and interpersonal competence among Filipino university students. Standardized self-report instruments were used to measure participants' self-perceptions and social functioning. These included the Body Esteem Scale–Revised (BES-R) and the Interpersonal Competence Questionnaire (ICQ). Both instruments were adapted and validated separately for male and female respondents to ensure construct validity, convergent validity, and reliability. Confirmatory factor analysis (CFA), composite reliability (CR), and average variance extracted (AVE) were calculated to evaluate psychometric quality. Multiple linear regression was used to analyze the predictive relationships between body esteem dimensions and interpersonal competence domains.

A post hoc power analysis was conducted using G*Power [44] to assess the adequacy of the regression models. The analysis used three predictors, a significance level of .05, and observed effect sizes. Results indicated that the total sample ($N = 341$) achieved full statistical power (1.0000), with a critical R^2 of approximately 0.0273. The male subgroup ($n = 234$) also reached a power of 1.0000, with a critical R^2 of about 0.0397. The female subgroup ($n = 107$) attained a power of 0.9997, with a critical R^2 of approximately 0.0888. These results demonstrate that the sample sizes were sufficient to detect meaningful effects in all models, including total, male, and female groups.

Figure 1 presents the power analysis plots for

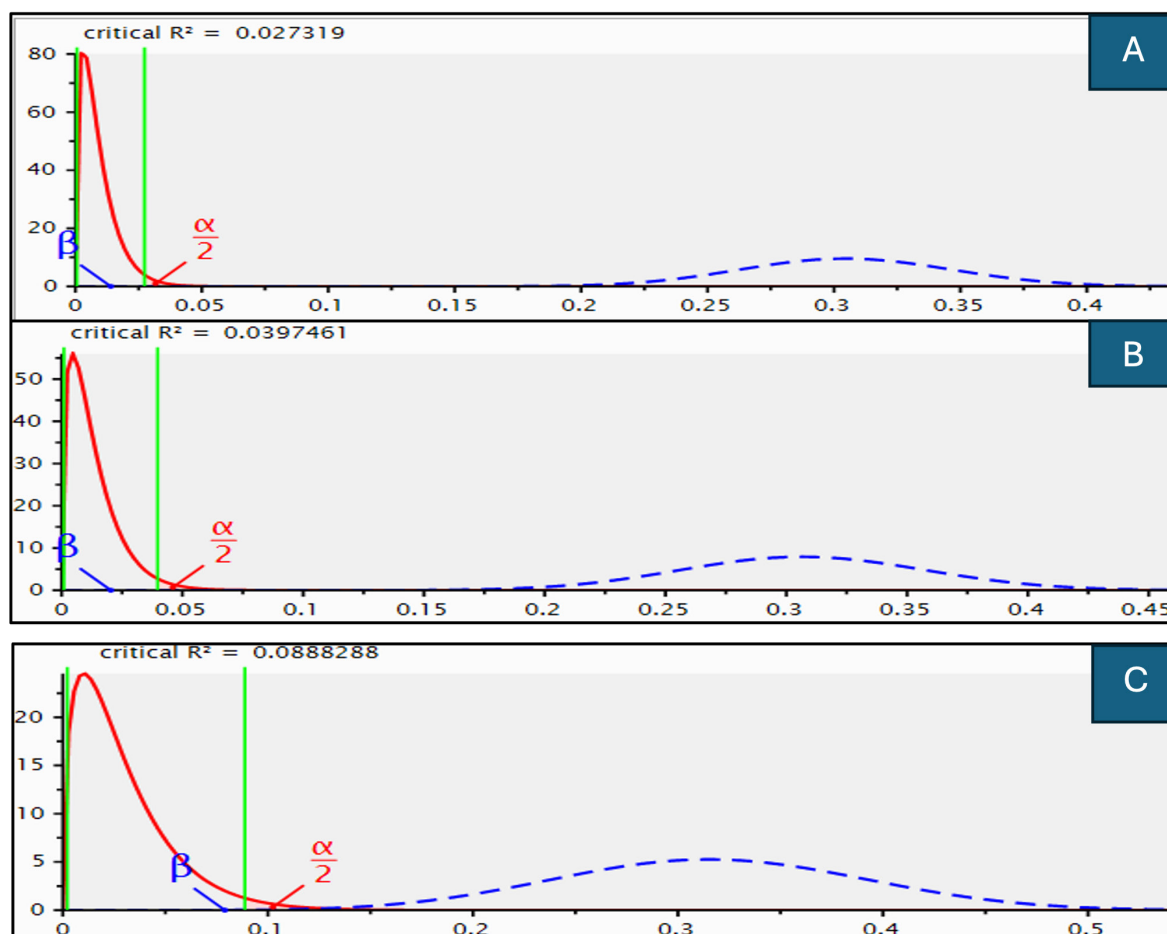


Figure 1. Post hoc power analysis for (A) all, (B) male, and (C) female respondents.

each regression model: (A) all respondents, (B) male respondents, and (C) female respondents. In all cases, power levels were well above the recommended threshold, indicating adequate sensitivity for the detection of true effects.

Research Instruments

The study used the Body Esteem Scale–Revised (BES-R), a gender-specific and multidimensional version of the original Body Esteem Scale that reflects contemporary cultural attitudes toward body image [2]. The BES-R includes separate subscales for men and women to account for the distinct ways each group evaluates their bodies. For male participants, the subscales are:

- Physical Conditioning
- Sexual Appearance
- Upper Body Strength.

For female participants, the subscales are:

- Physical Conditioning
- Sexual Attractiveness
- Weight Concern.

The BES-R has demonstrated strong construct and convergent validity in large undergraduate samples. It is considered a reliable and psychometrically sound tool for assessing self-perceptions related to body image [2, 34]. Participants responded to items

using a 5-point Likert scale, where higher scores reflected more positive body evaluations. Subscale scores were analyzed separately to preserve the multidimensional structure of the construct. Scores were computed by summing the responses for each dimension and dividing by the number of items to obtain a mean subscale score. For female participants, the three subscales included:

- *Sexual Attractiveness*: body scent, buttocks, chest or breasts, appearance of eyes, sex drive, sex activities, face, head hair, and skin condition
- *Weight Concern*: waist, thighs, body build, hips, legs, figure or physique, appearance of stomach, and weight
- *Physical Conditioning*: physical stamina, muscular strength, energy level, physical coordination, health, and physical condition.

For male participants, the subscales included:

- *Sexual Attractiveness*: body scent, appearance of eyes, sex drive, sex organs, sex activities, face, head hair, and skin condition
- *Upper Body Strength*: muscular strength, biceps, body build, arms, and chest or breasts
- *Physical Conditioning*: physical stamina, reflexes, energy level, physical coordination, agility, figure or physique, appearance of stomach, health, physical condition, and weight.

The present study utilized the Body Esteem Scale–Revised (BES–R) to assess participants’ perceptions of their own physical and appearance-related attributes. This instrument was developed based on Franzoi and Herzog’s original work on the multidimensional structure of body esteem [45]. It includes sex-specific subscales that reflect culturally and psychologically distinct aspects of body image among males and females. The BES–R has been shown to possess good construct validity and internal consistency, supporting its use in diverse cultural settings. Subscale scores were computed by averaging the ratings of retained items to produce a mean score per domain, reflecting participants’ evaluations of specific body-related attributes.

The study also employed the Interpersonal Competence Questionnaire (ICQ) [46], a multidimensional self-report instrument designed to assess perceived competence across five core domains of social functioning. These domains are Initiating Relationships, Negative Assertion, Self-Disclosure, Emotional Support, and Conflict Management. The ICQ consists of 40 items rated on a 5-point Likert scale. Depending on item phrasing, scale anchors ranged from “very uncomfortable” to “very comfortable” or from “poor at this” to “extremely good at this.” Higher scores indicate greater interpersonal competence. Each subscale includes eight items. Subscale scores were calculated by summing the item responses and dividing by eight to obtain a mean score on a uniform 1 to 5 scale. An overall interpersonal competence score was also computed by averaging responses across all 40 items.

The five subscales assess the following dimensions:

1. Initiating Relationships – introducing oneself, suggesting shared activities, making good first impressions, and engaging in conversation with new acquaintances
2. Asserting Displeasure or Personal Rights – saying no, confronting neglect, and expressing hurt feelings
3. Self-Disclosure – revealing personal information, expressing appreciation, and sharing one’s authentic self
4. Providing Emotional Support – listening attentively, offering comfort, and giving supportive feedback
5. Managing Interpersonal Conflicts – admitting mistakes, de-escalating tension, considering others’ viewpoints, and resolving disagreements constructively

The ICQ has demonstrated a stable five-factor structure, strong construct validity, and high internal consistency ($\alpha = 0.72$ to 0.92), along with good test–retest reliability ($r = 0.63$ to 0.89) across diverse populations [46, 47, 48, 49]. Subscale scores were analyzed separately to reflect the multidimensional nature of interpersonal competence.

The instruments were translated into Filipino using AI-assisted translation via ChatGPT 5.1 to ensure initial linguistic accuracy and consistency. The AI-generated versions were subsequently reviewed and refined by a Filipino language expert fluent in both English and Filipino. This expert validation ensured semantic, cultural, and conceptual equivalence with the original English versions. The process followed established guidelines, which emphasize that AI-assisted translations must undergo expert review to confirm their reliability and validity [50, 51, 52, 53]. As a result of this procedure, the Filipino versions of the BES–R and ICQ were confirmed to accurately reflect the intended meanings and constructs of the original instruments. This ensured both linguistic appropriateness and cultural relevance for Filipino respondents.

Refitting of the Instruments

Reliability and validity testing were conducted separately for male and female participants, as both the Body Esteem Scale–Revised (BES–R) and the Interpersonal Competence Questionnaire (ICQ) are designed to capture gender-specific patterns in body perception and interpersonal competence. The BES–R is inherently gender-specific, with distinct subscales for males and females that reflect different sociocultural standards and psychological constructs. For example, male participants tend to evaluate themselves based on physical conditioning, sexual appearance, and upper body strength. In contrast, female participants are more influenced by sexual attractiveness, weight concern, and physical conditioning. The ICQ was likewise reassessed separately for males and females to ensure that constructs such as initiation, self-disclosure, and emotional support were measured equivalently across groups. Testing the instruments by sex allowed for a more accurate assessment of structural patterns, factor loadings, and internal consistency within each group. This approach improved the psychometric precision, cultural appropriateness, and interpretive validity of the findings.

Data Gathering

Data were collected using a self-administered Google Form, available from October 13 to 18, 2025, during the first semester of the 2025–2026 academic year. The survey link was distributed through course instructors from one of the university’s colleges and shared in the official Messenger group chats of each academic section they supervised. The form was organized into five structured sections to ensure clarity and replicability. The first section introduced the study’s purpose, its relevance to Sustainable Development Goal 3 (Good Health and Well-Being), and the ethical principles guiding the research. These included voluntary participation, confidentiality, and the right to withdraw without consequence. The second section gathered demographic information

such as sex, age, height, weight, program, academic year, and class section. The third section contained the Body Esteem Scale Revised (BESR), which assessed participants' attitudes toward specific body parts and functions using a five-point Likert scale ranging from strong negative feelings to strong positive feelings. Filipino translations were provided to enhance cultural clarity. The fourth section included the Interpersonal Competence Questionnaire (ICQ), which measured five domains of social functioning: Initiation, Negative Assertion, Self Disclosure, Emotional Support, and Conflict Management. Items were rated on a five-point Likert scale from strongly disagree to strongly agree. This section was also presented bilingually in English and Filipino.

The final section featured the informed consent form, which outlined participants' rights, the purpose of the study, and confidentiality measures. Only responses that were fully completed and accompanied by informed consent were included in the final analysis. The form could be accessed using any internet-connected device and required approximately 10 to 15 minutes to complete. Following data collection, both the BESR and ICQ were reanalyzed separately for male and female participants to establish construct and convergent validity, as well as internal reliability. This step ensured that the instruments were culturally appropriate and psychometrically robust in the Filipino university context. References to model fit indices and reliability statistics are provided in Tables 2 through 5.

Potential Ethical Issues

The study received ethical clearance from the Local In-House Ethics Committee of the College of Sport, Exercise, and Recreation at a state university in Central Luzon prior to implementation. Following approval, formal authorization was obtained from the college's research coordinator to ensure compliance with institutional research protocols. Data collection was conducted voluntarily using an online Google Form designed to assess body esteem and interpersonal competence. All survey items were set as optional to respect participant autonomy and allow withdrawal at any time. Informed consent was obtained before participation. Respondents confirmed their understanding of the study's objectives, procedures, and confidentiality assurances. To support accessibility, the survey was available in both English and Filipino and remained open from October 13 to 18, 2025. It could be accessed from any device with an internet connection. All responses were stored securely in an encrypted cloud drive, accessible only to the research team. Data will be retained for one year and then permanently deleted. Results will be reported in anonymous, aggregated form to ensure that no personally identifiable information is disclosed.

The study followed established ethical standards related to voluntary participation, data protection, confidentiality, and academic integrity at every stage of the research process.

Statistical Analysis

Data were analyzed using Jamovi, IBM SPSS Statistics, and Microsoft Excel. Confirmatory Factor Analysis (CFA) was performed in Jamovi to assess the construct and convergent validity of the Body Esteem Scale Revised (BESR) and the Interpersonal Competence Questionnaire (ICQ). Validity testing was conducted separately for male and female participants. Reliability analysis included indicator reliability, interitem correlations, and item total correlations to evaluate internal consistency. Composite Reliability (CR) and Average Variance Extracted (AVE) were calculated in Microsoft Excel to further confirm internal consistency and convergent validity for each construct. After validation, multiple linear regression was conducted in IBM SPSS Statistics. The analysis examined how the dimensions of body esteem (Physical Condition, Sexual Attractiveness, and Weight Concern for females; Physical Condition, Sexual Attractiveness, and Upper Body Strength for males) predicted the five domains of interpersonal competence. These domains included Initiation, Negative Assertion, Self Disclosure, Emotional Support, and Conflict Management. Before conducting inferential analyses, the normality of the data was tested using the Shapiro-Wilk test. Statistical procedures were selected based on the outcome of this assessment. All analyses were interpreted at a significance level of alpha equal to 0.05.

Results

Table 2 presents the summary of construct and convergent validity results for the Body Esteem Scale Female (BES Female) and the Interpersonal Competence Questionnaire Female (ICQ Female). For the BES Female, all three factors (Physical Condition, Sexual Attractiveness, and Weight Concern) demonstrated significant standardized factor loadings ($p < .001$), ranging from 0.606 to 0.843. These results indicate that all retained items were strongly associated with their respective latent constructs. The model fit indices (chi-square with 132 degrees of freedom = 331, CFI = 0.847, TLI = 0.823, SRMR = 0.0667, RMSEA = 0.119) reflected a moderate but acceptable model fit.

Several items with factor loadings below the 0.60 threshold were excluded to improve model coherence and construct clarity. These items included Body Scent, Head Hair, Sex Activities, Chest or Breast, and Sex Drive. For the ICQ Female, the hypothesized five-factor model was supported. It included Initiation, Negative Assertion, Self Disclosure, Emotional Support, and Conflict

Management. All factor loadings were significant at $p < .001$ and ranged from 0.575 to 0.927. Model fit indices (chi-square with 199 degrees of freedom = 411, CFI = 0.875, TLI = 0.855, SRMR = 0.0687, RMSEA = 0.0997) indicated an acceptable overall fit.

Items with insufficient loadings or conceptual redundancy were removed. These included statements related to inviting new acquaintances, expressing hurt feelings, and revealing intimate information prematurely. The remaining items

showed meaningful associations with their respective latent factors. These findings confirm the construct and convergent validity of the BES Female and ICQ Female instruments for assessing body esteem and interpersonal competence among female participants.

Table 3 presents the summary of reliability indices for the Body Esteem Scale Female (BES Female) and the Interpersonal Competence Questionnaire Female (ICQ Female). For the BES

Table 2. Summary of construct and convergent validity for the BES female and ICQ female

Instrument	Factor / Domain	Loading Range ($p < .001$)	Strongest Loading (λ)	Model Fit Indices	Excluded Items
BES Female	Physical Condition	0.744 – 0.843	0.843	χ^2 (132) = 331, CFI = 0.847, TLI = 0.823, SRMR = 0.0667, RMSEA = 0.119	Body Scent, Head Hair
	Sexual Attractiveness	0.606 – 0.743	0.743		Sex Activities, Chest or Breast, Sex Drive
	Weight Concern	0.693 – 0.823	0.823		None
ICQ Female	Initiation	0.575 – 0.833	0.833	χ^2 (199) = 411, CFI = 0.875, TLI = 0.855, SRMR = 0.0687, RMSEA = 0.0997	Inviting new acquaintances, Suggesting activities, Calling new dates, Presenting first impressions, Attending gatherings
	Negative Assertion	0.639 – 0.887	0.887		Addressing embarrassing behavior, Confronting broken promises, Expressing hurt feelings, Communicating anger
	Self-Disclosure	0.630 – 0.927	0.927		Revealing intimate information early, Confiding sensitive details, Sharing shameful experiences, Showing real self, Lowering emotional defenses, Discussing anxieties
	Emotional Support	0.592 – 0.889	0.889		None
	Conflict Management	0.616 – 0.907	0.907		Accepting a valid viewpoint during anger, Avoiding explosive reactions

Table 3. Summary of reliability indices for the BES female and ICQ female

Instrument	Factor / Domain	Indicator Reliability (λ^2)	Residual Variance	Inter Item Correlations	Item Rest Correlations	CR	AVE
BES Female	Physical Condition	0.55 – 0.71	0.29 – 0.33	0.52 – 0.76	0.675 – 0.801	0.9099	0.6278
	Sexual Attractiveness	0.37 – 0.55	0.45 – 0.63	0.38 – 0.60	0.514 – 0.627	0.7565	0.4389
	Weight Concern	0.48 – 0.68	0.32 – 0.47	0.31 – 0.71	0.618 – 0.777	0.9062	0.5479
ICQ Female	Initiation	0.33 – 0.69	0.31 – 0.62	0.39 – 0.62	0.520 – 0.707	0.779	0.543
	Negative Assertion	0.41 – 0.78	0.29 – 0.59	0.41 – 0.68	0.521 – 0.709	0.819	0.533
	Self Disclosure	0.40 – 0.86	0.23 – 0.63	0.54	0.543	0.720	0.568
	Emotional Support	0.35 – 0.79	0.17 – 0.61	0.35 – 0.85	0.571 – 0.861	0.931	0.664
	Conflict Management	0.38 – 0.82	0.18 – 0.62	0.49 – 0.73	0.634 – 0.800	0.904	0.614

Female, all three dimensions (Physical Condition, Sexual Attractiveness, and Weight Concern) demonstrated satisfactory internal consistency and indicator reliability. Squared multiple correlations (λ^2) ranged from 0.37 to 0.71, indicating that the latent constructs explained a substantial proportion of item variance. Composite Reliability (CR) values exceeded the recommended threshold of 0.70, ranging from 0.7565 to 0.9099, reflecting strong internal consistency across subscales. Average Variance Extracted (AVE) values for Physical Condition (0.6278) and Weight Concern (0.5479) exceeded the 0.50 benchmark, indicating good convergent validity. The value for Sexual Attractiveness (0.4389) was slightly below the threshold but remained within an acceptable range.

For the ICQ Female, all five dimensions (Initiation, Negative Assertion, Self Disclosure, Emotional Support, and Conflict Management) also exhibited satisfactory reliability and validity indicators. Indicator reliability values ranged from 0.33 to 0.86, and residual variances were low, suggesting strong measurement precision. Composite Reliability scores ranged from 0.720 to 0.931, confirming high internal consistency across all domains. Similarly, AVE values ranged from 0.533 to 0.664, meeting or exceeding the 0.50 criterion for convergent validity. Inter item and item rest correlations were moderate to strong across all factors, reflecting cohesive but nonredundant item relationships.

Overall, these findings confirm that both the

BES Female and ICQ Female demonstrated robust reliability and convergent validity. Their use as reliable measures of body esteem and interpersonal competence among female participants is thus supported.

Table 4 presents the summary of construct and convergent validity results for the Body Esteem Scale Male (BES Male) and the Interpersonal Competence Questionnaire Male (ICQ Male). For the BES Male, the three dimensions (Physical Condition, Sexual Attractiveness, and Upper Body Strength) showed significant standardized factor loadings ($p < .001$), ranging from 0.630 to 0.835. This confirms that all retained items were strongly associated with their respective latent constructs. The model demonstrated good fit indices ($\chi^2[149] = 426$, CFI = 0.905, TLI = 0.891, SRMR = 0.049, RMSEA = 0.089), indicating an acceptable representation of the data. Items with loadings below 0.60, including Sex Drive, Sex Activities, and Sex Organs, were excluded to enhance model precision and improve factor clarity.

For the ICQ Male, the five-factor model (Initiation, Negative Assertion, Self Disclosure, Emotional Support, and Conflict Management) was supported. All factor loadings were significant at $p < .001$ and ranged from 0.600 to 0.899. Model fit indices ($\chi^2[395] = 826$, CFI = 0.904, TLI = 0.894, SRMR = 0.064, RMSEA = 0.068) reflected an acceptable and stable measurement structure. Several items were removed from specific domains due to low loadings or conceptual overlap. These included items related

Table 4. Summary of construct and convergent validity for the BES–male and ICQ–male

Instrument	Factor / Domain	Loading Range ($p < .001$)	Strongest Loading (λ)	Model Fit Indices	Omitted Items
BES–Male	Physical Condition	0.664 – 0.812	0.812	$\chi^2(149) = 426$, CFI = 0.905, TLI = 0.891, SRMR = 0.049, RMSEA = 0.089	Sex Drive, Sex Activities, Sex Organs
	Sexual Attractiveness	0.630 – 0.737	0.737		Sex Drive, Sex Activities, Sex Organs
	Upper Body Strength	0.713 – 0.835	0.835		None
ICQ–Male	Initiation	0.666 – 0.808	0.808	$\chi^2(395) = 826$, CFI = 0.904, TLI = 0.894, SRMR = 0.064, RMSEA = 0.068	Asking to get together, Suggesting things to do, Calling a new date, Attending gatherings, First impressions
	Negative Assertion	0.600 – 0.705	0.705		Embarrassment remarks, Broken promises, Hurt feelings, Expressing anger
	Self-Disclosure	0.604 – 0.703	0.703		Revealing intimate info early, Confiding sensitive issues, Shameful topics, Showing true self, Fears
	Emotional Support	0.642 – 0.899	0.899		None
	Conflict Management	0.670 – 0.839	0.839		Accepting others' viewpoint when angry, Avoiding explosive reactions

to asking to get together with someone new, revealing intimate information early, and accepting a valid viewpoint when angry. The retained items demonstrated strong associations with their respective constructs. These results confirm the construct and convergent validity of the BES Male and ICQ Male as reliable instruments for assessing body esteem and interpersonal competence in male participants.

Table 5 presents the summary of reliability indices for the Body Esteem Scale–Male (BES–Male) and the Interpersonal Competence Questionnaire–Male (ICQ–Male). For the BES–Male, all three dimensions (Physical Condition, Sexual Attractiveness, and Upper Body Strength) demonstrated satisfactory levels of internal consistency and reliability. Indicator reliability (λ^2) values ranged from 0.39 to 0.70, indicating that the latent factors explained a substantial proportion of item variance. Composite reliability (CR) values were all above the recommended threshold of 0.70, ranging from 0.81 to 0.91, confirming strong internal consistency across the subscales. Average variance extracted (AVE) values ranged from 0.46 to 0.60, supporting acceptable convergent validity, with the Upper Body Strength domain showing the highest explained variance (AVE = 0.60).

For the ICQ–Male, all five domains (Initiation, Negative Assertion, Self-Disclosure, Emotional Support, and Conflict Management) also exhibited strong reliability indices. Indicator reliability values ranged from 0.37 to 0.81, and residual variances remained low, indicating precise measurement of each construct. Composite reliability scores (CR = 0.7485 to 0.9371) demonstrated high internal consistency, while AVE values ranged from 0.428 to 0.682, confirming adequate convergent validity. Inter-item and item-rest correlations were moderate to strong across all dimensions, reflecting cohesive

yet distinct item relationships.

Overall, these results confirm that both the BES–Male and ICQ–Male possess robust reliability and convergent validity, establishing their psychometric soundness for assessing body esteem and interpersonal competence in male participants.

To determine whether the data met the assumption of normality prior to the main analyses, the Shapiro–Wilk test was conducted for each domain of the Interpersonal Competence Questionnaire (ICQ) across male and female participants. As shown in Table 6, all variables yielded significant p-values ($p < .05$), indicating that the data were not normally distributed. This violation of the normality assumption suggests that non-parametric statistical tests are more appropriate for subsequent analyses involving these variables, particularly for sex comparisons. The Body Esteem Scale–Revised (BES–R) is a gender-specific tool with distinct subscales for males and females, making cross-sex comparisons inappropriate. Because the male and female versions measure different constructs, normality testing and direct comparisons across sexes were not conducted.

After refitting the instruments separately by sex to ensure cultural and contextual appropriateness, the remaining items for each group reflected the most valid and coherent indicators of the measured constructs. For female participants, the retained components of the Body Esteem Scale–Revised (BES–Female) included three subscales. Physical Condition consisted of items related to physical stamina, reflexes, muscular strength, energy level, agility, health, physical condition, and coordination. Sexual Attractiveness included hips, appearance of eyes, face, figure or physique, and buttocks. Weight Concern covered waist, thighs, weight, body build, appearance of stomach, legs, and skin condition.

Table 5. Summary of reliability indices for the BES–male and ICQ–male

Instrument	Factor / Domain	Indicator Reliability (λ^2)	Residual Variance	Inter-Item Correlations	Item-Rest Correlations	CR	AVE
BES–Male	Physical Condition	0.44 – 0.66	0.31 – 0.56	0.38 – 0.75	0.625 – 0.774	0.91	0.57
	Sexual Attractiveness	0.39 – 0.54	0.46 – 0.61	0.23 – 0.60	0.377 – 0.640	0.81	0.46
	Upper Body Strength	0.50 – 0.70	0.30 – 0.50	0.48 – 0.70	0.632 – 0.767	0.88	0.6
ICQ–Male	Initiation	0.44 – 0.65	0.35 – 0.56	0.29 – 0.64	0.586 – 0.680	0.8396	0.568
	Negative Assertion	0.37 – 0.50	0.42 – 0.63	0.29 – 0.71	0.573 – 0.662	0.8639	0.443
	Self-Disclosure	0.37 – 0.49	0.51 – 0.64	0.36 – 0.49	0.500 – 0.587	0.7485	0.428
	Emotional Support	0.41 – 0.81	0.19 – 0.59	0.49 – 0.86	0.619 – 0.863	0.9371	0.682
	Conflict Management	0.45 – 0.70	0.30 – 0.55	0.49 – 0.67	0.656 – 0.801	0.9121	0.599

Table 6. Shapiro–Wilk Test of normality for ICQ domains by sex

Variable	Sex	Statistic (W)	df	p-value
Initiation	Female	0.966	107	.008
	Male	0.967	234	< .001
Negative Assertion	Female	0.942	107	< .001
	Male	0.965	234	< .001
Self-Disclosure	Female	0.943	107	< .001
	Male	0.970	234	< .001
Emotional Support	Female	0.938	107	< .001
	Male	0.934	234	< .001
Conflict Management	Female	0.961	107	.003
	Male	0.962	234	< .001

For the Interpersonal Competence Questionnaire (ICQ–Female), the retained items were grouped into five domains. Initiation included carrying on conversations with someone new, being an interesting and enjoyable person to be with, and introducing oneself to new acquaintances. Negative Assertion involved telling a companion you do not like their behavior, saying “no,” turning down unreasonable demands, and standing up for one’s rights. Self-Disclosure consisted of expressing appreciation for a close companion and moving conversations beyond superficial talk. Emotional Support included all original items. Conflict Management covered admitting mistakes, setting aside resentment, listening carefully, understanding perspectives, avoiding escalation, and focusing on specific issues.

Similarly, for male participants, the refitted Body Esteem Scale–Revised (BES–Male) retained three subscales. Sexual Attractiveness included body scent, appearance of eyes, face, head hair, and skin condition. Upper Body Strength consisted of muscular strength, biceps, body build, arms, and chest or breasts. Physical Condition covered physical stamina, reflexes, energy level, physical coordination, agility, figure or physique, appearance of stomach, health, physical condition, and weight. For the Interpersonal Competence Questionnaire (ICQ–Male), the retained items were grouped into five domains. Initiation included carrying on conversations with someone new, being an enjoyable person to be with, and introducing oneself. Negative Assertion involved telling a companion about unwanted treatment, saying “no,” rejecting unreasonable requests, and asserting one’s rights. Self-Disclosure consisted of expressing appreciation for a companion and deepening conversations. Emotional Support retained all empathy and guidance items. Conflict Management included admitting errors, setting aside grudges, listening carefully, taking perspective, and avoiding escalation. These items were computed using the standard procedures of each instrument. Item

responses within each subscale were summed and divided by the number of items to produce standardized subscale mean scores, consistent with the original scoring process.

Figure 2 presents the mean scores and standard deviations for the Body Esteem Scale Revised (BES-R) dimensions among male and female participants. Among females, the mean score was 3.36 ± 0.79 for Physical Condition, 3.38 ± 0.79 for Sexual Attractiveness, and 3.29 ± 0.79 for Weight Concern. Among males, the mean score was 3.40 ± 0.75 for Physical Condition, 3.40 ± 0.73 for Sexual Attractiveness, and 3.32 ± 0.79 for Upper Body Strength.

Figure 3 compares the mean interpersonal competence scores of male and female participants across the five domains and the overall Interpersonal Competence Questionnaire (ICQ) score. Females demonstrated higher scores in most domains, particularly in Negative Assertion, Self-Disclosure, and the total ICQ score. These differences indicate stronger interpersonal competence among females in self-expression, emotional openness, and overall relational functioning. No significant sex differences were observed in Initiation, Emotional Support, and Conflict Management, suggesting comparable abilities between males and females in initiating interactions, providing emotional support, and managing disagreements.

Figure 4 presents the diagnostic plots used to assess the assumptions of linearity, normality, and homoscedasticity in the regression model predicting total interpersonal competence (TIC) from physical condition, sexual attractiveness, and weight concern among male participants ($N = 234$). The histogram of residuals showed an approximately normal distribution centered around zero. This indicated that residuals were normally distributed. The normal P–P plot supported this finding. The points closely followed the diagonal line, suggesting no significant deviation from normality. The scatterplot of standardized predicted values versus standardized residuals showed a random

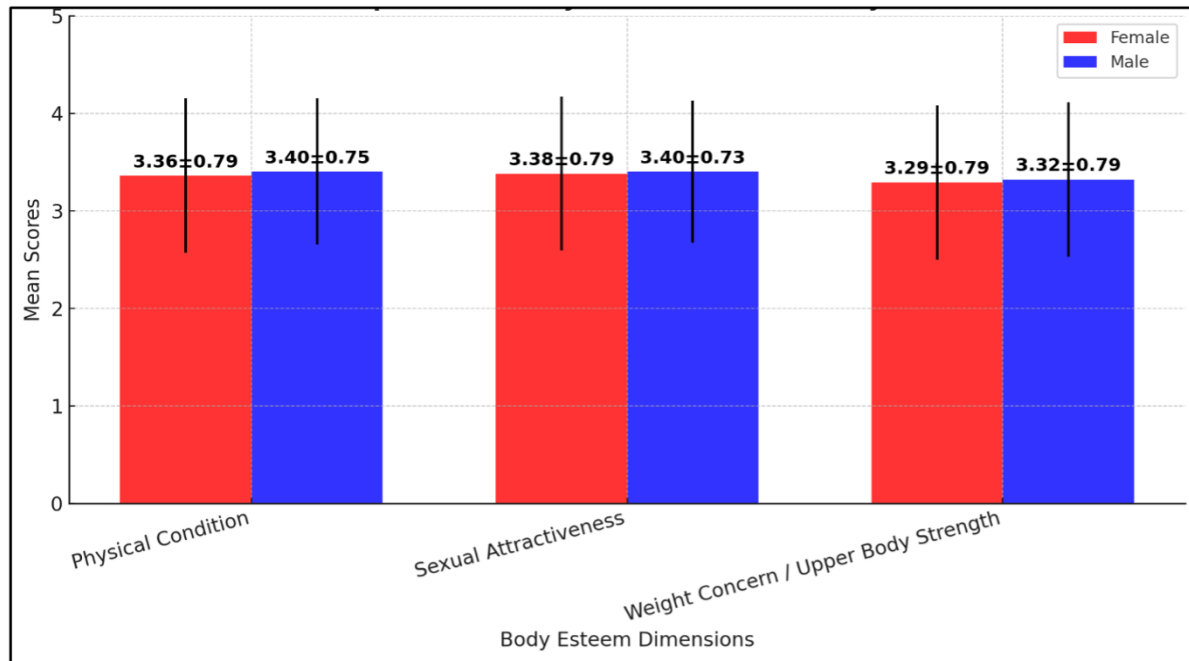


Figure 2. Levels of body esteem by sex

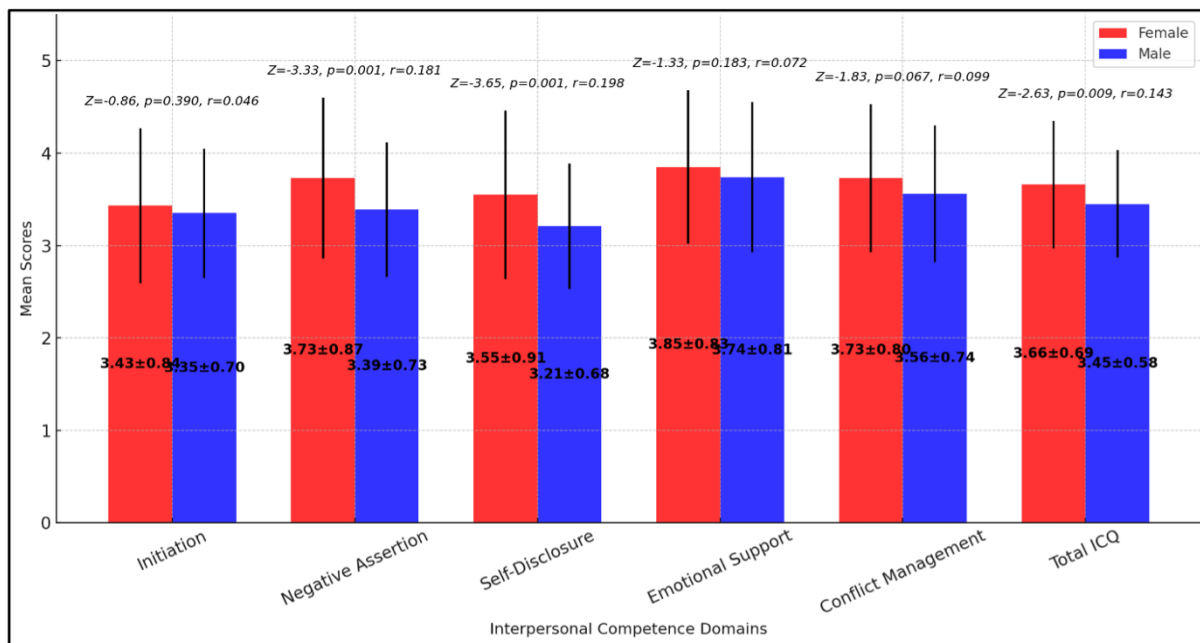


Figure 3. Levels of interpersonal competence by sex

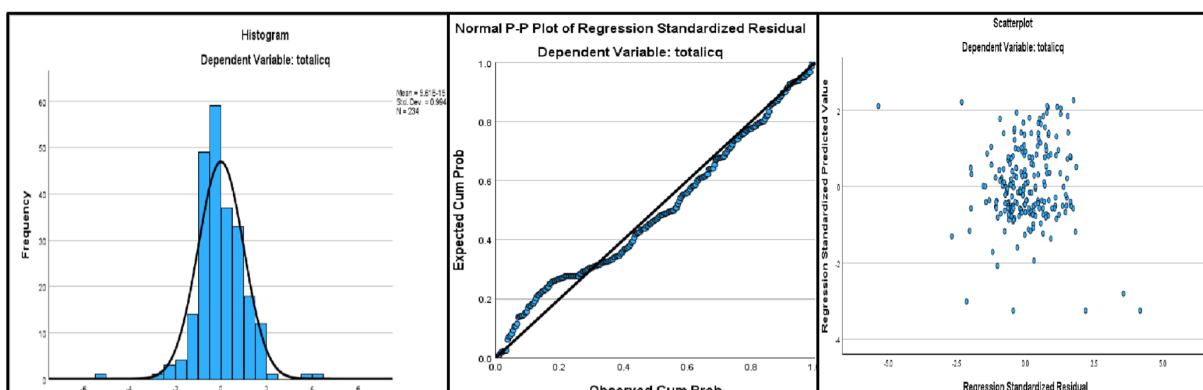


Figure 4. Diagnostic plots assessing key regression assumptions (male)

spread of points around the horizontal axis. There was no visible pattern or curve. This confirmed that the assumptions of linearity and homoscedasticity were met. Additionally, the Durbin–Watson statistic was 2.019. This indicated that residuals were independent and not autocorrelated. Overall, the diagnostic results confirmed that the regression model met the assumptions of linearity, normality, homoscedasticity, and independence of errors. These findings support the model’s validity and the reliability of its parameter estimates.

In Table 7, a multiple regression analysis was conducted to determine whether the components of body esteem, namely physical condition, sexual attractiveness, and upper body strength, significantly predicted total interpersonal competence (TIC) among male respondents. The overall regression model was statistically significant. When each component was examined separately, sexual attractiveness emerged as a significant positive predictor of interpersonal competence ($\beta = .278$, $t(230) = 3.56$, $p < .001$). In contrast, physical condition ($\beta = .133$, $t(230) = 1.20$, $p = .231$) and upper body strength ($\beta = -.114$, $t(230) = -1.21$, $p = .227$) were not statistically significant. These findings suggest that male participants who reported higher levels of sexual attractiveness also demonstrated higher levels of interpersonal competence. However, self-perceptions related to physical condition and upper body strength did not show a meaningful association with interpersonal competence.

Figure 5 shows the diagnostic plots used to assess the assumptions of the regression model

predicting interpersonal competence among female participants. The histogram of standardized residuals displayed a roughly normal, bell-shaped distribution (Mean = $-3.46E-15$, SD = 0.9350). This indicates that the residuals were approximately normally distributed. The Normal P–P plot also showed that the data points closely followed the diagonal line, confirming the assumption of normality. The scatterplot of standardized predicted values versus standardized residuals revealed a random pattern of points evenly dispersed around zero. This pattern supports both linearity and homoscedasticity. Additionally, the Durbin–Watson statistic was 2.140, indicating that the residuals were independent. These results confirm that the assumptions of normality, linearity, homoscedasticity, and independence were satisfied, supporting the validity of the regression model.

In Table 8, a multiple regression analysis was conducted to determine whether body esteem and its dimensions (physical condition, sexual attractiveness, and upper body strength) significantly predicted total interpersonal competence (TIC) among female respondents. The overall model was statistically significant, $F(3, 103) = 86.083$, $p < .001$. It explained 70.7 percent of the variance in interpersonal competence ($R^2 = 0.715$, adjusted $R^2 = 0.707$). Among the predictors, physical condition ($\beta = 0.017$, $t(103) = 0.168$, $p = 0.867$) was not statistically significant. Sexual attractiveness ($\beta = -0.326$, $t(103) = -3.137$, $p = 0.002$) was a significant negative predictor. Upper body strength ($\beta = 1.094$, $t(103) = 7.556$, $p < .001$) was a significant positive

Table 7. Multiple regression results for male participants predicting total interpersonal competence

Predictor Variable	Standardized β	Adjusted R^2	F	t	p-value	Decision
Body Esteem (overall model)	–	.132	12.860	–	< .001	Significant
Physical Condition	.111	–	–	1.201	.231	Not Significant
Sexual Attractiveness	.278	–	–	3.559	< .001	Significant
Upper Body Strength	–.114	–	–	–1.211	.227	Not Significant

Note. TIC = Total Interpersonal Competence.

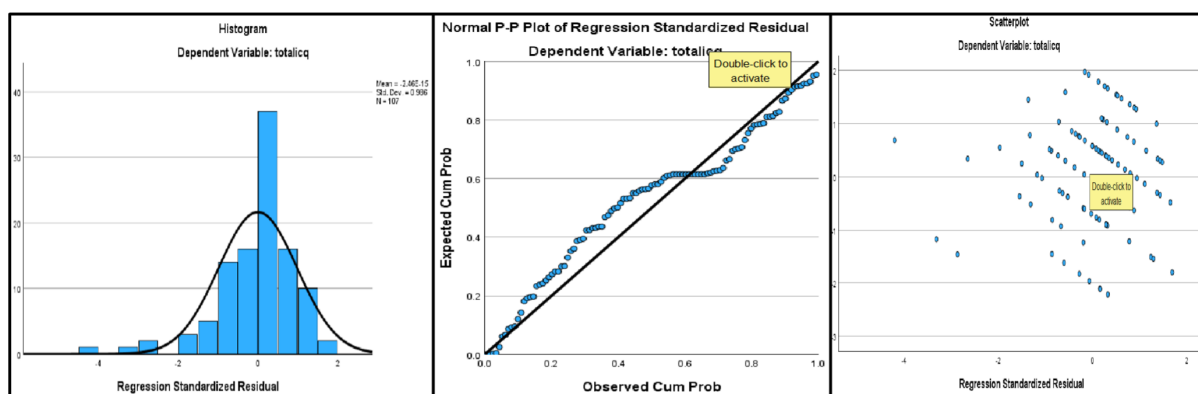


Figure 5. Diagnostic plots assessing key regression assumptions (female)

Table 8. Multiple regression results for female participants predicting total interpersonal competence

Predictor	Standardized Coefficient (β)	Adjusted R ²	F	t	p-value	Significance
Body Esteem (overall)	–	0.707	86.083	–	< .001	Significant
Physical Condition	0.017	–	–	0.168	0.867	Not significant
Sexual Attractiveness	–0.326	–	–	–3.137	0.002	Significant
Weight Concern	1.094	–	–	7.556	< .001	Significant

Note. PHYCON = Physical Condition; SEXATTR = Sexual Attractiveness; WEICONC = Weight Concern; TIC = Total Interpersonal Competence.

predictor. These results suggest that individuals with higher perceptions of upper body strength tend to report greater interpersonal competence. In contrast, those with higher perceptions of sexual attractiveness report lower interpersonal competence. The findings support the conclusion that body esteem as a whole is a significant predictor of interpersonal competence, with sexual attractiveness and upper body strength identified as meaningful components.

Discussion

The present study examined gender differences in body esteem and interpersonal competence among Filipino university students. It also explored how specific dimensions of body esteem predict interpersonal competence across sexes. Both male and female participants exhibited comparable levels of body esteem across all dimensions of the Body Esteem Scale–Revised (BES-R). However, females reported slightly lower self-evaluations in physical condition, sexual attractiveness, and weight concern. Males showed marginally higher esteem in the corresponding domains. No direct comparison was conducted because the BES-R has a sex-specific structure. Still, the observed patterns align with global findings showing that females tend to report lower body esteem and greater dissatisfaction, particularly regarding weight and appearance. Males more often aspire toward muscularity or physical size [39, 40, 41, 42, 43, 44]. These findings reflect Objectification Theory, which posits that societal pressures lead women to internalize external standards of beauty, and Social Comparison Theory, which suggests that individuals evaluate themselves based on perceived social ideals. Theoretically, these results support the multidimensional model of the body [12, 44], showing that Filipino men and women interpret body-related constructs differently within their sociocultural context. These findings also suggest the need for university-based body image programs that emphasize body functionality, health, and holistic self-worth over aesthetic ideals. At a societal level, government agencies such as CHED and the Department of Health (DOH) can promote media literacy and body diversity campaigns that challenge Westernized beauty norms and celebrate

the variety of Filipino bodies.

In terms of interpersonal competence, females demonstrated higher competence than males in several domains, particularly in Negative Assertion, Self Disclosure, and Emotional Support. This indicates stronger emotional expressivity and relational openness. Males and females performed comparably in Initiation, Emotional Support, and Conflict Management. This suggests balanced strengths in initiating interactions and maintaining social harmony. These patterns align with global and regional research showing that women typically exhibit greater empathy, emotional support, and self-disclosure [45, 46, 47, 48], while men tend to display stronger self-regulation and assertiveness [49]. These findings support gender socialization theories and the Emotional Intelligence framework. These findings support gender socialization theories and the Emotional Intelligence framework. Filipino women, shaped by collectivist values and cultural expectations of *pakikipagkapwa*, are socialized to prioritize emotional connection and empathy [46, 47, 50]. Universities can use these insights to develop gender-sensitive social skills programs that enhance both emotional expressivity and regulation. CHED and DepEd may also incorporate interpersonal competence development into student wellness curricula, framing relational skills as essential to academic and civic engagement in Filipino higher education.

Among male respondents, the regression analysis showed that body esteem, particularly sexual attractiveness, significantly predicted interpersonal competence. Physical condition and weight concern were not significant predictors. Men who perceived themselves as more sexually attractive reported greater interpersonal competence. This finding is consistent with global evidence linking perceived attractiveness to social confidence and relational success [51, 52, 53, 54, 55].

These results support self-concept and body-esteem models, which emphasize that self-perceived attractiveness contributes to social competence through greater self-efficacy and social validation. In the Filipino context, this relationship may reflect collectivist and relational norms. Perceived social appeal can reinforce confidence in group and peer interactions. Guidance programs should help male

students build body confidence based on authenticity and self-acceptance, not external approval. These findings also suggest a need to redefine Filipino masculinity. Models of masculinity should focus less on appearance and more on empathy, integrity, and social intelligence.

For female respondents, body esteem dimensions, specifically upper body strength and sexual attractiveness, significantly predicted interpersonal competence. Upper body strength was a positive predictor, while sexual attractiveness was a negative one. Women who value their physical capability tend to show stronger social skills and confidence. In contrast, those who place high importance on sexual attractiveness may experience reduced interpersonal competence due to increased self-consciousness or objectification. This is consistent with Functionality Appreciation Theory, which promotes valuing the body for its capabilities rather than appearance [56, 57, 58]. These findings support self-objectification theory and show that appreciation of body functionality contributes to relational competence and psychological well-being. Universities can support this through body-positive programs such as strength-based fitness, sports participation, and empowerment workshops aimed at building confidence and reducing self-objectification [59, 60]. These results also support the need for gender-sensitive education and media content that emphasizes women's skills and resilience rather than appearance. Educational institutions such as CHED and DepEd can include these principles in gender and development programs to support healthy body image and social competence among Filipino youth [31, 56, 61, 62].

Study Limitations and Future Directions

This study is subject to several limitations that should be taken into account. The sample was drawn from a single state university in Region III, which limits its generalizability to other regions or populations. Additionally, the reliance on self-report measures (BES-R and ICQ), adapted from Western contexts, introduces potential social desirability bias and cultural misalignment. The BES-R's gender-specific nature also precluded direct male–female comparisons in overall body esteem. Theoretically, these constraints underscore the need for culturally grounded psychological models, potentially guided by *Sikolohiyang Pilipino*, that capture the unique intersections of body image, social identity, and interpersonal competence among

Filipino youth. Practically, future studies should employ nationwide or multi-institutional samples, include key control variables such as socioeconomic status and mental health, and utilize longitudinal or mixed-method approaches to enhance causal interpretation. Policy-wise, academic institutions and funding bodies should invest in the localization and validation of psychometric tools to ensure culturally appropriate assessments and support evidence-based interventions that promote students' psychosocial well-being.

Conclusions

The present study revealed that Filipino university students displayed generally similar levels of body esteem. However, females reported slightly lower evaluations in physical condition, sexual attractiveness, and weight concern. Females also demonstrated greater interpersonal competence, particularly in emotional expression and support.

Regression analyses showed that sexual attractiveness predicted higher interpersonal competence among males. Among females, upper body strength predicted higher interpersonal competence, while sexual attractiveness predicted lower interpersonal competence. These results suggest that body perception influences social functioning differently across genders. Self-perceived strength and attractiveness play distinct roles in shaping confidence and social skills.

These findings highlight the need for universities to implement gender-sensitive wellness and counseling programs. Such programs should promote body positivity, self-acceptance, and interpersonal growth. Policymakers, including CHED and DOH, can support broader initiatives that encourage healthy body image and social development.

However, this study was limited to a single university, used a cross-sectional design, and relied on self-report data. These limitations constrain generalizability and prevent causal interpretation. Future research should include larger and more diverse samples. Longitudinal methods are also recommended to better understand the relationship between body esteem and interpersonal competence among Filipino youth.

Conflict of interests

The authors declare that there is no conflict of interests.

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