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Voicing Self-Worth: A Cross-Language Examination of Body Self-Esteem in FLL

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Abstract

Despite existing studies of the intersection between language acquisition and learner´s identity development, little is known about the relationship between psychosocial phenomena, such as body self-esteem and foreign language learning. To address this gap, this pilot study explored the relationship between foreign language learning and body self-esteem among English and French students in higher education in central Mexico. Employing the Body Satisfaction Scale (BSS), we compared both groups´ indicators in relation to 20 body parts and 6 physical appearance criteria. Although descriptive tendencies showed that French students presented higher evaluations on intimate appeal items (e. g., sexy, erotic), than English students, no statistically significant differences were revealed by corrected independent samples t-test (all p-value .05). Preliminary analysis of covariance (ANCOVA) identified age as a significant predictor of scores for five of the six physical appearance criteria, with small but discernible effects (partial ² = .047- .084), but language group did not show clear influence in any of the items (partial ² .01). The study´s limited power (N = 88) excluded the identification of small-to-moderate sized effects. Findings suggest that demographic variables, particularly age, might be a stronger correlate of variance in body self-esteem than language group association in this context. Future research is needed with larger samples to explore cultural schemas of body self-esteem in language-specific representation.

Keywords: body image, language identity, higher education

1. Introduction

Is your native language self more confident than your foreign language self? This question captures the core idea that guided this study. Though it may not be evident to the outside observer, some of the most important, yet imperceptible pressures for foreign language learners are to conform to the accent, behaviours and looks established by the target language (Kramsch, 1993). The issue of looks is especially noticeable in Latin-American countries where historical colonization was both linguistic and aesthetic, and where Eurocentric cultural beauty standards

and appearance criteria (Krozer & Gómez, 2023) constitute one of the fundamental impositions, inherent to social practices and governed by regulations, norms, and institutional control (Foucault, 1977; Pennycook, 1994). Considering physical appearance, a form of symbolic capital in social hierarchies (Bourdieu, 1977), its negotiation in foreign language learning becomes a mechanism for acquiring new symbolic capital. The ways in which body self-esteem interacts with foreign language learning remain under-researched. This study attempts to explore this gap by examining body-self-esteem in foreign language learning.

This study is part of a larger project examining lookism in foreign language education, an issue addressed as a normalized phenomenon with documented consequences in areas such as, employment selection, promotion and general perceptions of competence (Hamermesh, 2011; Minerva, 2017; Rhode, 2010). We argue that foreign language learners negotiate their compound identities, delineated by symbolic systems like language and appearance, through Kramsch´s (2012) concept of symbolic competence. This study specifically explores data from English and French students in central Mexico, offering a contextualized lens on this invisible psychosocial phenomenon embedded within learning dominant foreign languages in a Latin-American country.

The pilot study aims to explore and compare language-specific associations with body self-esteem and problematize the normalized hierarchies of physical appearance interwoven in language education. Eventually, this study seeks to distinguish ways to adopt more comprehensive and informed pedagogies.

2. Literature Review

2.1. Foreign Language Learning and Identity

This study takes a sociocultural perspective of language learner identity (Brown, 2014). Viewing identity as something shaped by a wide range of social factors. Norton´s concept of investment (2000) invites us to see motivation not as a static trait but as an ongoing process, influenced by how learners perceive their access to valuable resources, material as well as symbolic, that can improve their social and cultural capital, including the sense of belonging. This understanding of learners as complex individuals agrees with Block´s (2007) idea of identity as something continually negotiated, shaped by age, gender, social class and the wider context. Building on this, Piller and Takahashi (2010) emphasise that the way learner´s see is also shaped by perceptions of gender and race. Language proficiency, they argue, interacts with how attractive someone is perceived, how their accent sounds, and how desirable they seem to be, all qualities that are unequally distributed in linguistic capitals that reinforce hierarchies of race, nationality and class.

As a result, negotiating one´s identity as a language learner is not just about language skills, but also includes the body itself and physical appearance in general. This means that physical appearance acts as a mechanism for maintaining social hierarchies, in everyday interactions, as well as in broader cultural narratives (Spiegel, 2022). Therefore, when learners invest in a new linguistic identity (Norton, 2000), the process becomes inherent to how they feel and think about their own bodies, or body self-esteem as the affective and cognitive evaluation of their own physical appearance (Cash & Pruzinski, 1990).

2.2. The Multidimensionality of Body Self-Esteem

Body self-esteem is a core component of self-concept and denotes an individual´s subjective evaluation and affective response toward their physical appearance, including weight, skin, facial features and other attributes (Cash & Pruzinski, 1990). It is a multidimensional construct

because besides encompassing perceptual, affective, cognitive and behavioural components, is also influenced by the sociocultural pressure and beauty standards (Rodgers et al., 2020). The Tripartite Influence Model (Thompson et al., 1999) suggests that family, peers and media are the primary sociocultural influences of body image development through which ideals of beauty and attractiveness are communicated and internalized from a young age.

Previous research has consistently exposed body dissatisfaction as a risk factor for mental health consequences, including depression and anxiety, particularly among university students (Alghamdi et al., 2023; Sowislo & Orth, 2013). Similarly, higher levels of neuroticism and lower levels of conscientiousness have been associated with greater probability of body dissatisfaction, both in men and women (Allen & Robson, 2020). Conversely, higher body satisfaction has been associated with a lower propensity for appearance-related-consideration, proposing that effective management of body self-esteem may contribute to better mental health (Matera et al., 2024)

Gender has also been identified as a critical determinant of body self-esteem, demonstrating that women report higher levels of body dissatisfaction and weight concern than men (Fayet et al. 2012; Tobin-Richards et al.,1983; Wardle et al., 2004). Specifically, body image in higher education has been found as attributing differentiated evaluations depend on gender, for example, while men tend to report more dissatisfaction with thinness, the majority of women report dissatisfaction with being overweight (Ferreira et al., 2024). Furthermore, factors like globalization and Eurocentrism have been suggested as intensifiers of these pressures, internalizing beauty standards and developing a fear of exclusion based on appearance (Ai et al., 2024; Saiki et al., 2023). Additionally, Navarro et al. (2021) found age as an important factor, clarifying that body dissatisfaction is not only more common among female students, but that it intensifies with age.

Separate but related investigations have explored the relationship between body self-esteem and academic achievement (Yu et al., 2022; Wu et al., 2021), as noted by researchers, the lower the self-esteem, the lower the achievement. Other scholars have identified specific demographic characteristics and appearance attributes such as age, disability, colour, gender and clothing, as determinants of social biases in educational interactions, both in face-to-face and virtual settings, proposing expanding the anti-discrimination legislation to include physical appearance as a protected category (Mason & Minerva, 2022).

Despite these contributions a significant gap remains. While literature details several sociocultural dimensions of body image and its relation to academic achievement and gender, the ways in which body self-esteem interacts with foreign language learning is under-explored. Foreign language learning involves the adoption of new linguistic and sociocultural frames, dynamics and practices that directly interact with the reconceptualization of one´s physical perception. This negotiation, internalized as clarified by Norton (2000) and Pavlenko and Lantolf (2000), must be extended and consider the domain of body self-esteem.

2.3. Research Aim

Interestingly, body self-esteem and its related elements may not align in straightforward ways. For example, an individual may have high overall self-esteem but low body satisfaction or be considered socially attractive yet perceive themselves as unattractive. Therefore, existing literature calls for further research to understand how body self-esteem relates to specific factors and precise social practices.

Therefore, this study explores the incidence of body self-esteem and compares its specific criteria between two demographically similar groups of English and French learners at a public university in central Mexico. The study employs the aforementioned theoretical lens to explore

whether language group affiliation can reveal the complex and asymmetrical intersections of language, identity and body self-esteem perceptions. In doing so, this study aims to make visible an overlooked psychosocial dimension of foreign language education.

3. Method

3.1. Context and Participants

The study was conducted at a public university´s foreign language faculty in central Mexico. It was selected for several reasons. First because we wanted to examine a context with broader implications, e. g., trainees who will eventually become language teachers and join the public or private language education sector; second, because this institution incorporates students from rural, suburban and urban areas of the state and surrounding states, offering a rich and diverse experiential environment; third, because many students have had opportunities to travel abroad as part of their professionalization, and thus their opinions are broad-reaching; and finally, for reasons of accessibility and convenience, as both researchers are part of the community.

The study focused on two B.A. programs, which are similar in design, curriculum and schedules, except for the target language. Additionally, both programs have a common characteristic: female students constitute the majority of the population, outnumbering male students two to three times. The programs also have substantial differences. A key one is the number of enrolled students. The English program receives between three and seven times more students than the French program, reflecting a higher demand for learning English as a foreign language in this context.

The study employed a convenience sample of 88 participants (N=88), which was considered appropriate for an initial exploratory comparison. To ensure group comparability, participants were divided into two language groups, English Language Teaching students (ELT), and French Language Teaching students (FLT) to maximize group comparison, despite the pilot´s restricted sample size.

Group A: 44 (ELT) students.

Group B: 44 (FLT) students.

Participants´ ages ranged from 18 to 30 years of age, and their academic progression covered semesters 1-10: 37.5% (n= 33) in semesters 1-3, 37.5% (n= 33) in semesters 4-6, and 25% (n= 22) in semesters 7-10, reflecting a predominance of early-stage language courses. Additionally, most students were from the host city (62.5%, n= 55), while 19.3% (n= 17) were from suburban or rural communities in the surrounding area, and 18.2% (n= 16) were from other states of Mexico. Regarding housing situation, 12.5% (n= 11) lived independently, whereas 87.5% (n= 77) lived with their families. Employment in part-time jobs while studying was reported by 29.5% (n= 26) of the participants, and the remaining 70.5% (n= 62) reported studying full-time. Finally, the groups exhibited a significant gender imbalance, with 69.3% (n= 61) female and 30.7% (n= 27) male students, highlighting one of the main limitations of this study.

While the demographics summary illustrates the heterogeneity of the groups, it also highlights the predominant trends in academic progression.

3.2 Instrument

Body self-esteem criteria were assessed using the Spanish version of the Body Satisfaction Scale [Escala de Autoestima Corporal] (Peris et al., 2016), widely used to measure body self-esteem, as it integrates body satisfaction and body appeal and is highly recommended for use with adolescents and young adults. The survey is designed in two sections: the first section consists of 20 items to assess the degree of satisfaction with 20 specific body parts. The score for each item ranges from 1 (not at all satisfied) to 10 (extremely satisfied). The second section contains 6 items to assess the degree of satisfaction with criteria for self-perceived physical appearance, with responses coded numerically from 1 (not at all satisfied) to 10 (extremely satisfied) for statistical analysis.

Reliability analysis was assessed for each of the two sections of the survey using Cronbach´s alpha. Data derived from the first section, Body Satisfaction Scale, containing 20 items, yielded a Cronbach´s $\alpha = 0.95$, while the second section, Self-Perceived Physical Appearance, containing 6 items, yielded a Cronbach´s $\alpha = 0.95$. Both values indicating high internal consistency.

3.2. Procedures

After obtaining institutional ethics approval and informed consent for our larger project, as part of a pilot stage, participants were invited to complete a survey on body self-esteem. The survey was administered during language lessons, two from English and two from French training courses. The survey contained specific demographic information, and the body self-esteem scale divided in two sections. Completion of the survey took approximately 10 minutes.

We employed a between-groups comparative design to explore initial differences:

Independent variable: the specific foreign language being learned (English/French).

Dependent variables: body self-esteem criteria.

This design was adopted to generate initial quantitative information for our group differentiation assumption. Variables in subsequent analysis, e. g. gender distribution and age, are considered exploratory.

3.3. Analysis

The collected data were processed using SPSS (Version 21). Preliminary analysis checked for statistical assumptions, including descriptive statistics.

To test our primary comparative assumption, chi-square and independent t-tests were conducted. Initial chi-square tests on the full 10-point scale were suggestive; however, they were limited by low expected cell frequencies (< 5 in > 20 % of cells). To address this issue, the scale was collapsed into three combined categories for statistical analysis: 1=Low approval (original scale 1-3), 2=Moderate approval (original scale 4-7), and 3= High approval (original scale 8-10). Only chi-square results are reported based on this collapsed variable.

Original p-values were obtained from SPSS. Bonferroni correction was applied by dividing the alpha level ($\alpha = .05$) by the number of tests ($k = 6$), yielding a significance threshold of .00833. For the false-discovery rate, Benjamini-Hochberg (Benjamini & Hochberg, 1995) procedure was used, p-values were ranked from the smallest to the largest, and critical values were calculated as $(i/k) \times \alpha$ (i = rank position). These calculations were performed manually and then verified with R´s adjust function.

Independent t-test corrections incorporated: Family-Wise Error Rate (FWER), controlled using

Bonferroni correction (α = .05/6 = .0083), and False Discovery Rate (FDR) was controlled using Benjamini-Hochberg procedure.

Since the sample of the study (N=88) was not determined by an a priori power analysis, for exploratory ANCOVA tests, a post hoc sensitivity power analysis was performed using *G* Power 3 (Faul et al., 2007), which indicated that for the primary comparison between groups α= .05, and power= .80, the design was sensitive enough to detect only large effects ($f \geq 0.37$, partial $\eta^2 \geq .12$). The observed effect for the Group variable was negligible (partial $\eta^2 < .001$). Therefore, even when the study was adequately powered to detect large group differences, small or medium effect detection was limited.

This study included confirmatory and exploratory components. The primary confirmatory hypothesis predicted the group variable as having a significant effect on body self-esteem ratings. Secondary exploratory analysis evaluated confound roles of gender and age. The analysis protocol was not preregistered.

4. Results

To provide a foundation for the observed patterns, results are presented in four sections. First preliminary descriptive statistics are introduced (4.1). Second, compared frequencies are presented (4.2). Third, compared means is reported (4.3). Finally, an analysis of covariance is informed (4.4).

4.1. Descriptive Statistics

The descriptive statistics were calculated for groups combined (N = 88), analysing each of the two sections of the survey separately. Table 1 shows the results for the body satisfaction indicators.

Data from the body satisfaction scale revealed a generally positive evaluation among participants. As presented in Table 1, with means ranging from 6.11 to 8.36, responses are in between *Satisfied* (6) to *Very Satisfied* (8). These findings indicate that participants hold a generally positive perception of body satisfaction. Specifically, the table shows that ears and eyes received the highest satisfaction scores (M= 8.36 each), followed by the mouth (M= 8.08), height (M= 7.90) and skin (M= 7.75). Conversely, the body parts with the lowest satisfaction scores were the stomach (M= 6.11), waist (M= 6.63), nose (M= 6.70), weight (M= 6.72) and hips (M= 6.88). The body parts with moderate satisfaction were the back, thighs, chest and proportions, with means ranging from 7.02 to 7.38.

Notably, the body part with the greatest variability among participant was weight (SD= 2.77). On the other hand, eyes and ears indicated the least variability among participants (SD= 1.75). The variability pattern shows that, on average, participants were more satisfied with facial characteristics (e. g., eyes, ears and mouth) and less satisfied with their mid-body parts (e. g., torso, back, proportions).

These specific numerical data are consistent with Tobin-Richards et al. (1983), who found that the lowest body satisfaction scores were for hips, waist, and weight, compared to the highest scores for ears and eyes. Conversely, unlike the same study, which reported *hair* as one of the lowest rated body parts, in this study, this body part was among the highest scored (M= 7.60) for the whole sample.

Table 1. Scores on the Body Satisfaction Scale (N = 88)

	M	SD
Stomach	6.11	2.65
Waist	6.64	2.42
Nose	6.70	2.60
Weight	6.72	2.77
Hips	6.88	2.52
Belly	6.90	2.33
Buttocks	6.97	2.61
Muscle Tone	6.97	2.44
Back	7.02	2.35
Thighs	7.24	2.34
Chest	7.31	2.40
Proportions	7.38	2.38
Legs	7.39	2.47
Shoulders	7.47	2.20
Hair	7.60	2.24
Skin	7.75	2.30
Height	7.90	2.34
Mouth	8.08	1.85
Eyes	8.36	1.75
Ears	8.36	1.78

Note. Scale ranged from 1 (not at all satisfied) to 10 (extremely satisfied). Means are ordered from lowest to highest satisfaction.

Table 2 shows the descriptive analysis for the second section of the survey, on self-perceived physical appearance.

Table 2. Scores on the Self-Perceived Physical Appearance Scale (N = 88)

	M	SD
How erotic do you think your physical appearance is?	5.31	2.87
How sensual do you think your physical appearance is?	5.74	2.89
How sexy do you think your physical appearance is?	5.78	2.79
How attractive do think you your physical appearance is?	6.59	2.54
How interesting do you think your physical appearance is?	6.74	2.42
How charming do you think your physical appearance is?	6.91	2.62

Note. Scale ranged from 1 (not at all) to 10 (extremely). Means are ordered from lowest to highest value.

As presented in Table 2, evaluations of self-perceived physical appearance revealed notable patterns. For example, statistics showed a range of mean values from 5.31 and 6.91 on a 10-point Likert scale, indicating moderate overall ratings. Participants´ highest scores of self-

perceived physical appearance were reported for components of *charm* (M= 6.91) and *interesting* (M= 6.74), whereas the lowest scores were assigned to *how erotic* (M= 5.31) and *how sensual* (M= 5.74) they perceived their physical appearance to be.

Variability analysis also showed that the greatest disagreement was found for the items *how erotic* (2.87) and *how sensual* (2.89), which had the highest standard deviation and variances, indicating more polarized opinions are regarding these sexualized characteristics. Conversely, the lowest standard deviation was for the item *how interesting* (2.42), showing more agreement among participants.

The outcomes in Table 2 further highlight a tendency to assign higher evaluations to social and interpersonal characteristics (e. g., charm, interest) than to those related to physical pleasure (e. g., eroticism). This pattern may suggest that participants are more comfortable using broader, socially oriented descriptors than those with sexual connotations.

4.2. Inferential Statistics (Chi-Square)

Preliminary chi-square test on the 20 items from the first section of the survey (Body Satisfaction Scale) did not reveal any statistical significance with language group. Conversely, results from the second section (Self-Perceived Physical Appearance) on the original 10 point-scale revealed uncorrected significant outcomes in 3 specific items across groups: *how interesting* (p= .034), *how erotic* (p= .017) and *how* sexy (p= 041). These results suggested that Group B perceived themselves more positively in these three characteristics. Although, the distribution appeared visually significant, these results violated the assumptions of minimum expected cell frequency (< 5), highlighting the importance of prioritizing effect size interpretation over marginal p-values.

To address this issue, the 1-10 original Likert scale were collapsed into three ordinal categories: 1= Low approval (original 1-3 points), 2= Moderate approval (original 4-7 points), and 3= High approval (original 8-10 points). After collapsing categories to meet test assumptions and applying multiple comparison corrections, no statistically significant correlation remained (Table 3). However, effect sizes revealed a consistent pattern.

Table 3. Chi-Square Analyses of Group Differences in Collapsed Appearance Categories with Corrections

Criterion	X^2	P uncorrected	P (FDR-corrected)	Cramer´s V	Linear-by-Linear X^2	p (uncorrected)	P (FDR-corrected)	Direction
Erotic	5.84	.054	.108	0.26	4.72	.030	.090	French
Sexy	5.46	.065	.108	0.25	3.92	.048	.096	French
Sensual	4.87	.088	.132	0.24	4.70	.030	.090	French
Interesting	4.57	.102	.132	0.23	3.45	.063	.108	--
Attractive	2.35	.308	.308	0.16	2.19	.139	.167	--
Charming	1.65	.438	.438	0.14	1.41	.235	.235	--

Note. N = 88 (44 per group: English vs. French). Cramer´s V effect sizes: .10 (small), .30 (medium), .50 (large). Dashes indicate no significant trend. FDR-corrected p-values apply separately to the family of 6 Pearson´s X^2 tests and the family of Linear-by-Linear tests.

As observed, none of the six Pearson´s chi-square tests or linear-by-linear tests examining physical appearance associations remained statistically significant (all corrected p > .5). Therefore, from a strict hypothesis-testing perspective, we cannot reject the null hypothesis of

independence for any of these six criteria.

Despite the lack of statistical significance, ordinal trends are consistent and deserve exploratory interpretation. As may be seen in Table 3, effect sizes (Cramer´s V) and uncorrected ordinal trends were stronger for criteria related to more intimate appeal, e. g., erotic (V= 0.26), sexy (V= 0.25) and sensual (V= 0.24) compared to more general, social and neutral descriptors, e. g., charming (V= 0.14) and attractive (V= 0.16).

Even when this primary comparison did not provide definitive evidence of association between language groups and physical appearance perceptions, the consistency in the corrected results, categorized in effect sizes and ordinal trends, suggested a nuanced pattern.

Therefore, we conducted an exploratory post-hoc analysis to examine group differences on a combined measure. The combination of intimacy appeal (erotic, sexy, sensual), which showed the most salient trends in prior analysis, was averaged as the mean. By doing so, results of this composite analysis revealed a non-significant difference with a medium effect size, with Group B (French) scoring higher (M= 6.12, SD= 1.45) than Group A (English) (M= 5.56, SD= 1.62), t (86)= 1.78, p= .079, d= 0.38, 95% CI (-0.04, 0.80).

Consequently, results after correction showed no statistically significant association between language group and specific appearance criteria. Results, however, showed consistent patterns of small-to medium effect sizes and ordinal trends for criteria related to intimate appeal. These outcomes, even if they did not reach conventional significance, suggest a potential underlying difference. This pattern deserves targeted investigation in future and larger scale studies.

4.3. Independent Samples t-Tests

To continue our between-group comparative tests in self-perceived physical appearance criteria, we conducted independent samples t-tests on the six criteria. Table 4 below shows the results.

Table 4. Independent Sample t-Tests for Self-Perceived Physical Appearance Criteria

	Group A English	**Group B French**	**t (86)**	**P (uncorrected)**	**p (FDR-corrected)**	**Cohen´s d (95%CI)**		
Criterion	M	SD	M	SD				
Interesting	6.32	2.46	7.16	2.33	-1.65	.103	.168	0.35 (-0.07, 0.76)
Charming	6.52	2.72	7.30	2.48	-1.39	.168	.202	0.30 (-0.12, 0.71)
Attractive	6.16	2.51	7.02	2.52	-1.61	.111	.168	0.34 (-0.08, 0.75)
Sexy	5.23	2.62	6.34	2.88	-1.90	.061	.147	0.41 (-0.02, 0.83)
Sensual	5.18	2.62	6.30	3.06	-1.83	.070	.147	0.39 (-0.03, 0.81)
Erotic	4.95	2.57	5.66	3.14	-1.15	.253	.253	0.25 (-0.17, 0.66)

Note. N = 88 (44 per group). Scale: 1 (not at all) to 10 (Extremely). Negative t-values indicate higher scores for Group B. FDR-corrected p-values (Benjamini-Hochberg) are reported for the family of six t-tests. The Bonferroni-corrected significance threshold is α= .0083

Consistent with descriptive trends, according to data presented in Table 4, all mean differences showed negative values, indicating consistent tendencies of Group B reporting higher scores for self-perceived physical than Group A. However, none of them reached significance ($p < .05$) after multiple correction. The largest difference in means, which approached conventional significance threshold, was found, again, for sexy and sensual (both 1.11 points), which also had the smallest uncorrected p-values ($p = .061$ and .070, respectively). Additionally, the consistent direction of all mean differences and the small-to-medium effect sizes (Cohen´s d range = 0.25- 0.41) indicated a consistent directional trend, though not significant of Group B rating higher.

Correction procedures confirmed the absence of statistically significant differences. Bonferroni correction (FWER) revealed adjusted significance threshold of $p = < .0083$., none of the comparisons reached this significance. For the Benjamini-Hochberg (FDR) correction no p-value was less than its corresponding B-H critical value (all FDR-corrected p. > .5), as seen in Table 4.

These non-significant associations agreed with preliminary results in chi square tests, however, considering the consistent trends and medium effect sizes for some criteria, we conducted an exploratory analysis. This secondary analysis was meant to explore whether covariates might account for variance in the patterns of results. We specifically ran analysis of covariance (ANCOVA), with gender and age as covariates to test their potential influence.

4.4. Analysis of Covariance

To examine group differences on the six self-perceived physical appearance criteria after controlling for demographic variables, we conducted six separate one-way analyses of covariance (ANCOVAs). Each analysis treated one of the six appearance criteria as dependent variables, with Group as the fixed factor and gender and age as covariates. The combined results are presented in Table 5.

Table 5. Summary Results of ANCOVAs for Self-Perceived Physical Appearance (N = 88)

Criterion	Source	F (1, 83)	p	Partial η^2
Interesting	Group	0.15	.695	.002
	Gender	4.34	.040	.050
	Age	7.58	.007	.084
	Model	3.15	.018	-
	Adj. R^2	-	-	.090
Charming	Group	1.39	.168	.030
	Gender	0.23	.632	.003
	Age	6.40	.013	.072
	Model	1.97	.107	-
	Adj. R^2	-	-	.043
Attractive	Group	0.23	.636	.003
	Gender	3.40	.069	.039
	Age	4.10	.046	.047
	Model	2.21	.075	-

Criterion	Source	F (1, 83)	p	Partial η^2
	Adj. R^2	-	-	.053
Sexy	Group	0.39	.534	.005
	Gender	1.25	.266	.015
	Age	4.15	.045	.048
	Model	2.48	.050	-
	Adj. R^2	-	-	.064
Sensual	Group	0.57	.453	.007
	Gender	1.18	.280	.014
	Age	4.50	.037	.051
	Model	2.14	.083	-
	Adj. R^2	-	-	.050
Erotic	Group	0.06	.804	.001
	Gender	0.23	.632	.003
	Age	6.40	.013	.072
	Model	1.97	.107	-
	Adj. R^2	-	-	.043

Note. Partial η^2 benchmarks: .01 = small, .06 = medium, .14 = large (Cohen, 1988).

As seen in Table 5, the group variable showed non-significant effects for all six criteria ($p > .53$, partial $\eta^2 < .01$), consistent with the corrected t-test results. Conversely, age revealed a more robust pattern, showing significant small-to-medium effects (partial η^2 range= .047- .084) across five of the six criteria. Effects for gender were more variable, showing one significant small effect ($p = .040$, partial $\eta^2 = .050$ for interesting), one marginally nonsignificant effect of similar magnitude ($p = .069$, partial $\eta^2 = .039$ for attractive), and nonsignificant effects on the other criteria. These results collectively suggest that, within the parameters of this study, stable demographic variables (age) explained more variance in self-perceived appearance than the group variable.

The consistent pattern of negligible effects for the group variable (partial $\eta^2 = < .01$) indicates that the experimental manipulation did not meaningfully influence self-perceived physical appearance criteria when demographic variables were considered. However, the study´s power was constrained by the sample size (N = 88). The post hoc sensitivity analysis indicated that the present sample had 80 % power ($\alpha = .05$) to detect only large effects ($f \geq 0.37$, partial $\eta^2 < .12$). Therefore, while results offer some evidence against a large effect of the group manipulation, they cannot reliably confirm the existence of smaller meaningful effects.

In contrast with group differences, the modest in scale but significant results for age detected within the study´s limits, suggest a stable relationship where older participants report more positive self-perceptions. The isolated significant effect for gender on the *interesting* criteria, connected with its marginal effect on *attractive,* points to a more variable and less robust pattern that requires replication.

Collectively, these results suggest that, within this study´s limits, stable demographic variables, particularly age, explained more variance in self-perceived physical appearance than the group

variable. These findings underscore that ANCOVA with modest sample size and limited covariates may be useful for exploratory control but not robustly detect small group effects. Future research should employ larger samples to provide precise small effects and moderating variables.

5. Discussion

Preliminary evidence suggested differences in body self-esteem descriptors between English and French language students in basic analyses, but these differences were not sustained when controlling for covariates. While some quantitative differences are suggestive with small to medium effects, their replication in a larger study is critical. These null results for our primary hypothesis demand enhancement more than rejection. The concepts of investment (Norton, 2000) and symbolic competence (Kramsch, 2012) are still critical, but their application may need to be more nuanced than a merely group language association.

Specifically, Group B´s non-significant trends for higher self-perceived ratings on criteria of sexual appeal (e. g., *sexy, erotic*) may suggest a more subtle dimension of symbolic negotiation (Bourdieu, 1977). The trend could reflect the specific language cultural schema, but also a form of symbolic competence of learners internalized aesthetic beliefs associated with the target language. Thus, the investment in a foreign language may not necessarily raise or low body self-esteem but instead trigger which specific criteria of physical appearance are symbolically significant.

The consistent finding of age as a significant predictor is coherent with previous developmental and sociocultural research that suggests that body-self-esteem evolves interacting with social dynamics and cultural norms (Navarro et al., 2021; Rodgers, 2020). The specific nature of this relationship requires further analysis, especially during late adolescence and early adulthood, a crucial period for the development of body-self-esteem.

The relatively limited role of gender as covariance is noteworthy, but also requires further validation, in particular because it contrasts with previous literature that often emphasizes gender differences in body self-esteem (Fayet et al., 2012; Navarro et al., 2021; Matera et al., 2024; Wardle et al., 2004). However, we must acknowledge the small and imbalanced gender sample in this study.

Future research should go beyond group comparison to investigate the way learners construct discursively these physical appearance criteria in specific classroom social practices to offer a richer and deeper lens into the development of symbolic competence of foreign language learning.

6. Conclusion

This study provides an initial empirical investigation into the relationship between foreign language education and the development of socio-psychological phenomena, such as body self-esteem. By connecting these areas, and exploring demographic variables, this study aims to expand discussions on how normalized hierarchies are intertwined with education, informing more comprehensive educational contexts.

Empirically, this study contributes by questioning general assumptions about the neutrality of educational settings toward influencing appearance criteria and body self-esteem development. Studies like this might help visualizing the impact of formal language education over internalized psychosocial phenomena and inform pedagogical approaches that promote critical awareness.

In conclusion, within this foreign language educational context, age showed a more consistent pattern of variance in body self-esteem ratings than gender or language group affiliation. The relatively limited gender effect found here, challenges assumptions of its prevalence in previous studies of body-self-esteem.

7. Pedagogical Implications

Having presented the findings of this study, the following pedagogical implications are proposed for foreign language educators:

First, considering the foundational Eurocentric cultural beauty standards, educators may include group discussions and reflective dialogues to explore multilingual resources and multimedia beauty representations to help critically deconstruct body image and appearance standards in relation to language in general, and foreign language learning in particular.

Second, although not statistically confirmed, the potential for different cultural schemas of self-representation, e. g., Group B showing trends to self-evaluate higher on sexy, erotic, etc., even if it is speculative, highlights the need to identity and work on practices that validate differences and use cultural knowledge as a pedagogical resource, creating learning environments that explicitly value diversity and promote inclusive language.

Finally, finding age as a consistent pattern of covariance invites educators to focus on the developmental phases of body image. Educators working with adolescents and young adults might establish routines and mechanisms, e. g., anonymous well-being surveys and questionnaires to monitor student body self-esteem and general appearance perceptions. These mechanisms should be linked to confidential support protocols and provide access to counsellors and specialists, recognizing that body image worries are critical during this stage.

The integration of these practices might help address some of the complex socio-psychological dimensions of body-image more effectively within foreign language education.

8. Limitations

The sample size in this study, while acceptable for preliminary pilot comparison, limited the statistical power to detect small-to-medium effects and the generalizability of the findings. A post hoc sensitivity analysis showed that the design had 80% power ($\alpha = .05$) to detect only large effects (partial $\eta^2 \geq .12$) for the between-groups comparison. Future research with larger and randomized samples is needed to confirm these preliminary results. The identified patterns, however, highlight potential differences that merit further investigation.

In particular, the significant gender differences in the context is a limitation that must be considered, since it affects generalizability and the capacity of the study to analyse gender differences robustly. Additionally, finding regarding age requires future longitudinal research, perhaps in combination with other social and contextual variables. Additionally, future studies should explicitly test the hypothesis that language group differences in physical self-concept are more pronounced for intimate appeal attributes (e. g. sexy, sensual, erotic) than for other more general physical appearance characteristics.

Conflict of Interests Statement

The authors declare that they have no conflict of interest concerning this paper´s study, authorship and publication. Authors have not received any financial support, external funding or personal incentive that could have appeared to influence this study.

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