Gender but not parental educational assortative mating is associated with mate selection preference among undergraduate students in a Nigerian university

[1]Ogundele, Olusegun E., [1]Banjo, Folake M., & [1]Ogbonnaya, Uchenna N.

[1]Department of Biological Sciences, Tai Solarin University of Education, Ogun State, Nigeria.

✉: ogundeleoe@tasued.edu.ng; ogbonnayaun@tasued.edu.ng; +2347030143333; +2348066649107

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Abstract:
Assortative mating, particularly educational homogamy, significantly influences mate selection; however, the relative influence of gender and parental educational background remains under-examined in sub-Saharan African contexts. This study examined the associations between gender and parental educational assortative mating (PEAM) and mate selection preferences among 985 undergraduate students at a Nigerian university. Data were collected using a structured questionnaire assessing demographic characteristics, parental educational background, and mate selection preferences. Separate binary logistic regression models were estimated for each mate selection criterion, adjusting for parental education and age. Strong preferences were observed for partners who are bold and confident (93%) and who dress attractively (70%); moderate preferences for religious (67%), sport-loving (65%), social (56%), and same-age (54%) partners; but low preferences for partners' (un)troublesomeness (45%), profession (44%), complexion (43%), and height (43%). Gender emerged as a consistent correlate of several mate preferences, whereas PEAM showed limited independent associations. Females were significantly more likely than males to prioritise a partner's age (62% higher odds), height (34% higher odds), and profession (30% higher odds), but were less likely to prioritise boldness and confidence. These findings suggest that gender-related sociocultural factors may play a more salient role than parental educational matching in shaping mate preferences among this population. Interpretations are limited to the institutional context studied, and further multi-site research is recommended.

Keywords: **Assortative mating, Homogamy, Mate selection, Nigeria.**

1. Introduction

ASSORTATIVE mating, the non-random pairing of individuals based on phenotypic or genotypic similarities, is a pervasive phenomenon across the animal kingdom, including humans [1]. This phenomenon significantly influences the distribution of genes within populations, impacting evolutionary trajectories and shaping patterns of genetic diversity [1]. In humans, assortative mating is particularly evident in the selection of partners based on socioeconomic status, education, and physical attributes [2]. However, the interplay between gender, parental background, and mate selection preferences remains a complex and under-explored area, particularly within diverse cultural contexts like Nigeria.

Studies have highlighted a consistent trend of educational assortative mating across various populations [3–6]. Some other studies have demonstrated that individuals tend to choose partners with similar educational attainment [3–6]. This pattern is often attributed to several factors, including shared values, social homogamy (the tendency to associate with individuals from similar social backgrounds), and the potential for increased resource accumulation within the couple [4,5]. However, the strength and nature of this association can vary across cultures and contexts [7,8]. For instance, research on Hispanic young adults in the United States reveals gender differences in educational assortative mating, with college-educated Latinas exhibiting a higher likelihood of intermarriage compared to their male counterparts [7]. This suggests that cultural norms and gender roles can significantly influence the expression of educational assortative mating.

Parental background may also influence mate selection preferences in offspring. While parental educational assortative mating might indirectly influence offspring preferences through exposure to specific social circles and values, the direct predictive power of parental education on mate choice remains debatable [9]. A study examining the relationship between parental education and offspring's mate selection preferences in the context of violent crime found that assortative mating was moderate to strong, but its effect on variance components was minor [10]. This suggests that while parental influence exists, other factors, including gender, play a more significant role in shaping mate selection preferences.

The influence of gender on mate selection preferences is well-documented [11,12]. Evolutionary psychology posits that

sex differences in mate preferences stem from fundamental biological differences in reproductive strategies [13]. Men are often hypothesised to prioritise physical attractiveness as an indicator of fertility, while women are expected to place greater emphasis on resource acquisition and social status [13]. However, socio-economic factors also play a crucial role in shaping these preferences [14]. Studies have shown that gender roles and socio-economic status interact to influence the importance placed on various mate characteristics [14]. For example, women from higher socio-economic backgrounds might place less emphasis on a partner's financial resources, while men from lower socio-economic backgrounds might prioritise a partner's earning potential [14].

In the specific context of Nigeria, the interplay between gender, parental background, and mate selection preferences is likely to be further refined by cultural norms and traditions. Traditional gender roles and expectations regarding marriage and family formation might influence mate selection decisions [8]. Furthermore, the educational system and its stratification within Nigeria could also impact the expression of educational assortative mating and mate selection preferences [15]. The prestige associated with certain universities and educational institutions might influence mate choice decisions, particularly among university students [2,15]. Therefore, a study investigating the roles of gender and parental educational assortative mating in predicting mate selection preference among university students in a Nigerian university would make a significant contribution to the existing literature. It would provide valuable insights into the complex interplay between gender, parental background, and mate selection preferences within a specific cultural context. By examining the relative importance of gender and parental educational background in predicting mate choice, the study could shed light on the factors driving mate selection decisions among Nigerian university students and contribute to a more comprehensive understanding of human mating behaviour.

2. Materials and Methods

I. Design

This study employed a cross-sectional observational design to investigate the relationship between gender, parental educational assortative mating, and mate selection preferences among university students at Tai Solarin University of Education (TASUED). Data were collected quantitatively using a structured questionnaire.

II. Participants and Sampling

The study sample comprised 985 university students from Tai Solarin University of Education, Ijagun, Ogun State, Nigeria. Participants were selected using a stratified random sampling technique. The university's six colleges served as strata, ensuring representation from each college within the overall sample. Prior to participation, all potential participants received a detailed explanation of the study's purpose, procedures, and potential benefits and risks. Written informed consent was obtained from each participant before data collection commenced.

III. Ethical Considerations

Ethical approval for this study was obtained from the Directorate of Research and External Relations of the Institutional Review Board (TASUED/DRER/20/119). All research procedures adhered to the ethical guidelines outlined in the Declaration of Helsinki. Participant confidentiality was maintained throughout the study. Data were anonymised, and only aggregate data were reported. Participants were assured that their responses would be kept confidential and used solely for research purposes. They were also informed of their right to withdraw from the study at any point without penalty.

IV. Data Collection Instrument

A questionnaire, titled "Parental Assortative Mating and Mating Preference Questionnaire" was developed for data collection. The questionnaire comprised three sections (A-C). Section A gathered demographic information, including age, sex, year of study, course of study, college, marital status, and other relevant socio-demographic variables. Section B assessed parental assortative mating across six dimensions: parental education, parental height, parental age, parental physical attractiveness, parental religious orientation, parental ethnicity, and parental social class. Eight closed-ended items, adapted from Byun et al. [16], were used to measure these dimensions. Respondents indicated whether or not assortative mating existed for each dimension by selecting a single option from a provided list. From these responses, we derived a variable for parental educational assortative mating (PEAM). Participants were coded as having PEAM “Yes” if their parents had the same level of education, and “No” if otherwise. This measure was included in the analyses alongside the parents' individual education levels (father’s and mother’s educational qualifications) to assess the effect of parental educational homogamy on mate preferences, independent of each parent’s education. Section C measured respondents' mate selection preferences using a 10-item Likert scale (strongly agree to strongly disagree), adapted from Hur [17]. This section explored preferences related to various partner characteristics. The reliability and validity of the questionnaire were assessed prior to data collection through a pilot trial. Internal consistency reliability was evaluated using Cronbach's alpha. The adapted scales demonstrated acceptable reliability in our study as in previous studies [16,17].

V. Data analysis

Data analysis involved both descriptive and inferential statistical techniques. Descriptive statistics (means, standard deviations, frequencies, and percentages) were used to summarise demographic and other relevant variables. Inferential statistics, including correlation and regression analyses, were employed to examine the relationships between the variables. For these analyses, we focused specifically on

parental education by including both parents' education levels and the derived PEAM indicator. This emphasis on education was based on its central role in socio-economic status and mate choice in the literature, whereas other assortative dimensions (e.g., parental height or religion) were beyond the scope of this study.

3. Results

I. Demographics

Table I shows that 985 students, 494 females (50.2%) and 491 males (49.8%) participated in the study. A total of 806 (81.8%) of them were aged at least 20 years, while almost 90 percent of them were single. In terms of year of study, about 511 (51.9%) of the participants were in their final year of study. With regards to field of study, about 209 (21.2%) were studying science and information technology courses, 208 (21.1%) were studying humanities courses, 193 (19.6%) were studying specialised education courses, 174 (17.7%) were studying courses in social and management sciences, and 201 (20.4%) were students of vocational and technical education.

TABLE I
Demographic characteristics of study participants

Characteristic	Option	Frequency	%
Sex	Male	491	49.8
	Female	494	50.2
Age	< 20 Years	179	18.2
	≥ 20 Years	806	81.8
Year of study	1st Year	109	11.1
	2nd Year	164	16.6
	3rd Year	201	20.4
	Final Year	511	51.9
College	College of Science & Information Technology	209	21.2
	College of Humanities	208	21.1
	College of Specialised Education	193	19.6
	College of Social & Management Sciences	174	17.7
	College of Vocational & Technical Education	201	20.4
Marital status	Single	883	89.6
	Engaged	59	6.0
	Married	43	4.4

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II. Mating selection preferences by parental educational assortative mating

Table II shows the mating selection preferences of participants, stratified by parental educational assortative mating (PEAM) status. Parental educational assortative mating's influence varies across different aspects of partner selection. A strong overall preference was observed for partners who are bold and confident (93.3%), and it was consistent across both PEAM and non-PEAM groups, suggesting this trait is highly valued irrespective of parental educational background. The influence of parental educational assortative mating on specific mate selection criteria was not uniform. Some preferences showed minimal differences between the PEAM and non-PEAM groups. For example, the preference for a partner of the same age (54% PEAM vs. 46% non-PEAM), similar height (43% PEAM vs. 57% non-PEAM), similar complexion (43% PEAM vs. 57% non-PEAM), not troublesome (45% PEAM vs. 55% non-PEAM), or with a specific profession (44% PEAM vs. 56% non-PEAM) showed a relatively small difference between the groups.

Other preferences exhibited more substantial differences associated with parental educational assortative mating. The preference for a religiously similar partner (67% PEAM vs. 33% non-PEAM) showed a marked difference, suggesting that PEAM may play a more significant role in this aspect of partner selection. Similarly, a notable difference was observed in the preference for an attractively dressed partner (70% PEAM vs. 30% non-PEAM) and a socially compatible partner (56% PEAM vs. 44% non-PEAM). These findings suggest that PEAM might exert a stronger influence on preferences related to social compatibility, religious similarity, and personal presentation. The preference for a sport-loving partner (65% PEAM vs. 35% non-PEAM) also showed a notable difference.

III. Predictors of participants' mate selection criteria

Table III shows that the odds of preferring a religious mate is 0.67 times lower for participants whose mothers were, at least, educated to the university level than those whose mothers were not. The odds of giving consideration to a potential mate's age is 1.615 times higher in females than males. In addition, females have 1.341 and 1.297 higher odds of considering their mate's height and profession, respectively,

TABLE II
Mating selection preference and parental educational assortative mating of study participants

Mating Preference	PEAM [a] Yes, n = 478 (%)	No PEAM [a] Yes, n = 507 (%)	Total Yes, n = 985 (%)
Consideration for partner of the same age	262(54.8)	270(53.3)	532 (54.0)
Consideration for partner's height	280(58.6)	282(55.6)	562 (57.1)
Consideration for partner's religiousness	322(67.4)	333(65.7)	655 (66.5)
Consideration for partner who is not troublesome	265(55.4)	273(53.8)	538 (54.6)
Consideration for partner's attractive dressing	331(69.2)	359(70.8)	690 (70.1)
Consideration for social partner	273(57.1)	283(55.8)	556 (56.4)
Consideration for partner's complexion	211(44.1)	209(41.2)	420 (42.6)
Consideration for partner's profession	279(58.4)	270(53.3)	549 (55.7)
Consideration for sport-loving partner	317(66.3)	322(63.5)	639 (64.9)
Consideration for bold and confident partner	451(94.4)	468(92.3)	919 (93.3)

[a] Parental educational assortative mating

TABLE III
PREDICTORS OF PARTICIPANTS' MATE SELECTION CRITERIA

Mate selection criterion (Dependent)	Predictors for the logistic regression models – Beta values (p-values)					
	PEAM [a]	Father's EQ [b]	Mother's EQ [c]	Age	Sex	Constant
Age	0.929 (0.578)	0.976 (0.877)	1.076 (0.675)	0.958 (0.800)	**1.615 (0.000)**	0.933 (0.661)
Height	0.874 (0.314)	1.083 (0.606)	1.119 (0.519)	1.261 (0.177)	**1.341 (0.024)**	1.035 (0.828)
Religious consciousness	0.998 (0.987)	1.042 (0.802)	**0.665 (0.032)**	1.232 (0.254)	1.195 (0.192)	2.329 (0.000)
Not troublesome	0.979 (0.871)	1.067 (0.673)	0.792 (0.182)	0.982 (0.914)	0.929 (0.567)	1.447 (0.020)
Attractive dressing	1.062 (0.676)	0.823 (0.251)	1.042 (0.829)	0.918 (0.635)	1.093 (0.526)	2.422 (0.000)
Sociable	1.008 (0.953)	1.213 (0.214)	0.746 (0.096)	1.012 (0.943)	1.004 (0.978)	1.417 (0.028)
Complexion	0.838 (0.188)	0.862 (0.342)	1.330 (0.110)	0.767 (0.123)	1.257 (0.080)	0.675 (0.014)
Profession	0.787 (0.073)	0.799 (0.148)	1.134 (0.471)	0.821 (0.242)	**1.297 (0.046)**	1.362 (0.052)
Sport-loving	0.862 (0.282)	0.882 (0.434)	1.125 (0.512)	0.939 (0.716)	1.036 (0.793)	1.966 (0.000)
Bold and confident	0.643 (0.099)	0.897 (0.712)	1.680 (0.098)	0.964 (0.909)	**0.352 (0.000)**	25.001 (0.000)

[a] Parental educational assortative mating, [b] Father's Educational Qualification, [c] Mother's Educational Qualification.
Significant values are in bold

than males. Females were less likely to prefer a bold and confident mate than males.

4. Discussion

This study investigated the relationships between gender, parental educational assortative mating (PEAM), and mate selection preferences among university students in a Nigerian context. Our findings reveal a complex pattern where gender, rather than PEAM, emerges as a stronger predictor of some mate selection criteria. This contrasts with some previous research highlighting the significant role of educational homogamy in mate selection [3–6]. However, our results align with studies demonstrating the influence of cultural norms and gender roles on mate selection [7,8,14].

The significant influence of gender on mate preferences observed in our study is consistent with evolutionary psychology theories proposing sex differences in reproductive strategies [13]. While our findings do not directly support the classic evolutionary model, the observed gender differences in preferences for age, height, and profession suggest that biological factors, alongside sociocultural influences, shape mate selection. The stronger preference among females for older partners with established careers aligns with the evolutionary perspective's emphasis on resource acquisition [13]. Conversely, our findings showed that males placed relatively greater importance on partners' boldness and confidence, which may reflect valued social or personality traits in this context. This contrasts with the classic evolutionary expectation of male preference for fertility-related cues [13]. However, it is crucial to acknowledge that these preferences are not absolute and are likely shaped by the interplay of biological predispositions and sociocultural factors specific to the Nigerian context.

The relatively weak predictive power of PEAM on mate selection preferences in our study warrants further discussion. While previous research has demonstrated the influence of parental background on offspring mate choice [9,10], our findings suggest that this influence might be less pronounced in the Nigerian university setting. This could be attributed to several factors. Firstly, the increasing access to higher education in Nigeria might be weakening the traditional emphasis on social homogamy and the influence of parental background on mate selection [15]. Secondly, the diverse range of social and economic backgrounds among university students might dilute the influence of PEAM. Students from different socioeconomic strata might interact more freely, leading to a broader range of potential partners and reducing the impact of parental educational background on mate choice. Thirdly, the level of education among our participants might indicate a greater degree of autonomy in mate selection, reducing the influence of parental expectations.

The finding that the preference for a religiously similar partner is significantly influenced by PEAM is intriguing. This suggests that religious beliefs and practices might be more strongly embedded within family structures and social networks, even among highly educated individuals. This could reflect the strong influence of religion in Nigerian society and the importance of religious compatibility in marriage. Further research is needed to explore the complex interplay between religious beliefs, family background, and mate selection in this context.

The limitations of this study should be acknowledged. The cross-sectional design limits our ability to establish causal relationships between variables. Longitudinal studies are needed to track changes in mate selection preferences over time and to better understand the influence of parental background and life experiences. Given that our sample was limited to university students, these findings should be interpreted with caution regarding the broader Nigerian population. The focus on university students limits the generalisability of our findings to the broader Nigerian population. Future research should include a more diverse sample to capture the full spectrum of mate selection preferences within Nigeria.

In conclusion, this study provides valuable institution-specific insights into the complex interplay between gender, parental background, and mate selection preferences among Nigerian university students. While gender emerges as a

stronger correlate of several mate selection criteria, the influence of PEAM is more nuanced and context-dependent. The findings highlight the importance of considering both evolutionary and sociocultural factors in understanding human mating behaviour, particularly within diverse cultural contexts. These findings should be viewed as a foundation for future multi-institutional and longitudinal studies aimed at understanding mate selection processes in Nigeria more broadly.

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CONFLICT OF INTEREST

Authors declare no conflict of interest

AUTHORS' CONTRIBUTIONS

O.E. Ogundele: Conceptualization; Data curation; Analysis; Investigation; Administration; Resources; Validation; Visualization; Roles/ Writing -original draft; and Writing -review & editing.

U.N. Ogbonnaya: Resources; Validation; Visualization; Roles/Writing -original draft; and Writing -review & editing.

F.M. Banjo: Investigation; Resources; Supervision; Roles/Writing- original draft and Writing -review & editing.

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