Gendered Pathways in Higher Education: Perceptions of Filipino Students in Selected Professional Courses

ABSTRACT

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| --- |
| This study explores how gender influences course selection, societal perceptions, and career expectations from the experiences of Filipino students from Occidental Mindoro State College(OMSC). Focusing in four professional courses: Criminology, Information Technology (IT), Midwifery, and Engineering (CIME). The methods used in this study is a quantitative research design along with a structured online questionnaire administered to 202 students – 90 male, 112 female – from the four selected programs. Statistical analyses such as Chi-Square test, ANOVA, Pearson correlation, and t-test were performed using a software called SPSS. The analyses is used to asses gender’s influence on course selection, attitudes, and academic experiences. The findings stated that gender significantly influenced course selection (χ² = 17.844, p < 0.001), especially with Midwifery showing the greatest imbalance. Family and cultural factors were moderately correlated with course choice (r = 0.495–0.553). Furthermore, gender biases were linked to lower academic performances (r = 0.433) and intentions to shift courses (r = 0.628). All in all the study emphasizes that gendered norms continue to influence Filipino student’s academic pathways. As some programs demonstrated improved gender representation, there are still traditional stereotypes that persist. This is found in female-dominated fields like Midwifery. In order to foster equality in academic fields, institutions ought to implement inclusive policies, and strengthen support systems. Addressing factors stated in this study can help minimize gender-based decision making which will empower students to pursue careers based on their abilities and interests.  |

*Keywords: expectations, gender, stereotypes, inclusivity, perceptions*

1. INTRODUCTION

The influence that gender plays in choosing educational and employment paths has received much attention lately. Examining how gender biases and perceptions affected students' decisions to pursue higher education became important as cultural norms changed. This research conducted at Occidental Mindoro State College (OMSC) examines Criminology, Information Technology (IT), Midwifery, and Engineering (CIME) students. It sought to uncover the role of gender in course selection, gender role perceptions, and career aspirations of the students. Gender went a long way in determining societal expectations and individual choices, especially regarding education and career choices (Adair et al., 2024). This concept is aligned with the Social Role Theory by Alice Eagly (1987) which states that societal expectations shape the roles people take as a result of the differences in men’s and women’s behavior.

Moreover, this study evaluate attitudes by considering gender prejudice and policy, as these factors significantly influence societal expectations, which infiltrate educational institutions. Consequently, gendered students in these disciplines encountered pressures and hurdles that may have influenced their performance, professional progression possibilities, and satisfaction within their fields of study (Nagai, 2024). Although educational institutions have enacted policies aimed at improving and incorporating gender equality in education, gender stereotypes still exist, affecting male and female students differently. However, stereotypes are still persistent and reinforced through cognitive structures described in Gender Schema Theory (Bem, 1981). This theory explains how people still have internalized societal gender norms which still guide their decisions such as course preferences.

In this particular study, these aspects, especially the issue of gender as a factor in the choice of courses among students at OMSC, were addressed as well. They assessed their understanding of gender stereotypes, how these stereotypes influenced their fields of study, and which social, cultural, and familial factors affected their educational choices. Highlighted cultural identity as a determining factor in most genres where writers explore sexual orientation and gender roles (Mota Roboredo Amante, 2024). Further research also states that ongoing challenges of achieving gender equality in higher education, and workforce as pay gaps, and gender stereotypes are evident (Ibrahim et al., 2024).

Furthermore, the study focused on investigating how students studying criminology and engineering, which men dominate, are different from students studying Midwifery, a female-dominated profession. The researchers intended this comparison to shed light on the contextual factors that pose difficulties to students within the bias of specific gender-oriented fields of study. Understanding how culture and migration affect gender roles (Astinfeshan, 2023) in Iranian couples living in London came in handy in explaining the effects of culture on students' minds and attitudes about such contexts. Additionally, this context can be based on the Hegemonic Masculinity Theory (Connell, 1995), which describes how masculinity in society is characterized by dominance, physical strength, and aggression. This theory is applicable to specific professions, such as Engineering and Criminology as these spaces typically marginalizes femininity.

The study sought to add to the dialogue on gender bias in education. It sought to provide practical knowledge that might shape policies and initiatives meant to make the educational space more equitable for everyone without exceptions to their gender. Two publications stress the issue of gender-based violence and gender inequality in various spheres of life, which made this type of investigation necessary, aiming to ensure that educational environments enhance rather than hinder social change (Chanda Chansa Thelma, 2024) (Kevin Namiiro Kuteesa et al., 2024). This research aimed to reveal the gendered influences on students' construction of their curricular choices and how such perceptions of gender affected their educational pathways. The study's aims included surpassing investigations of gendered perceptions of gender biases in course CIME, considering the course pathways adopted, and recommending policies and strategies adopted at OMSC towards a more balanced educational environment.

It had been very common for students' educational choices to be enhanced, motivated, or even impeded by gender roles. For example, educators often negatively labeled males in soft subjects. They also directed fields along gender lines. Males frequently faced pressure to pursue technical and science disciplines such as IT and engineering, while females primarily trained in medical, teaching, and social sciences (Kevin Namiiro Kuteesa et al., 2024). Researchers noticed such trends in institutions of higher learning across all continents, particularly regarding gender differences in course choices. Other studies have explained how social capital has been an important variable affecting students' education pathways, such as first-generation engineering students who are often male and come with gender-conceived benefits from society and institutions (Emon & Nipa, 2024). Researchers found such gender biases evident in student interests and the approach to safety within educational settings. Safety models and cultures emerged in male-dominated engineering and technology areas, further contributing to gender segregation (del Carmen Triana et al., 2024).

Researchers observed the same trend in the higher education setting in the Philippines. Males occupied the majority of courses in criminology and engineering, while females concentrated on midwifery and other health-related courses (Khan, 2023). At Occidental Mindoro State College (OMSC), Criminology, Information Technology (IT), Midwifery, and Engineering (CIME) programs provided a fascinating avenue to investigate these gendered patterns about course choices. It is evident that societal perceptions of gender roles are evolving; however, specific courses still exhibit a higher enrollment of either male or female students. The factors behind that selection are curious. Appreciating these dynamics was fundamental in advocating for gender equity in the education system and students' preference for courses in which they were interested or had the potential rather than because of society.

The reasons behind gender differences in course choices can be ascribed to individual choices and are influenced by larger cultural, social, and institutional contexts. This is supported by Ecological Systems Theory (Bronfenbrenner, 1979), emphasizing the influence of five systems that depict nested environments with each interacting and affecting the others. Previous studies indicated that the mom and dad know the best model that started from early childhood socialization led to children internalizing gender roles, which then shaped their attitude and self-efficacy toward certain subjects, including academics (van Tienoven et al., 2023). Also, the same culturally held career occupational preferences further widened these inequities (Yucel & Chung, 2023). The study was particularly applicable among watershed segments in the Philippine territory under study, where conscience and practice of gender roles in education and profession were broadly noted (Nadrowski, 2024).

This study seeks to investigate how CIME, emphasizing gender choice, offers insight into the perceptions held by the CIME students at OMSC. The research focuses on answering the following questions:

1. How does the gender of students influence the choice of course among Criminology, Information Technology, Midwifery, and Engineering students of Occidental Mindoro State College (OMSC)?

2. How do the students perceive and relate to the gender of their choice-bearing areas of study?

3. How do students’ views and choices of courses within this view influence their perception of the general societal, cultural, and family views of gender within the course undertaken?

4. What is the extent of gender awareness and inclusivity displayed by students in their courses at Ozone State College?

5. How do gender relations affect students' career aspirations and expectations in their field?

6. How do gender stereotypes shape the academic experience of the students?

2. methodology

**2.1 Research Design**

This research used a quantitative approach to analyzing gender differences in educational selections. It was noted in the articles that quantitative methods could be used for the proper drilling of survey data, enabling the detection of a connection between gender and the type of course taken, in line with the argument that data must be analyzed in an orderly manner to comprehend the effects that gender stereotypes have on education (Priyashantha et al., 2023). The researchers conducted the study using survey instruments, providing self-administered structured questionnaires to respondents to analyze the relationships among variables. The statistical software used for data analysis is SPSS, which involves descriptive and inferential statistical tools. Data was analyzed and presented as mean, standard deviation, and frequency distribution tables. Other methods, such as t-tests, ANOVA, and inferential statistics, were employed to determine course selection preferences and other related factors based on gender. To assess the role of gender on academic performance and course perceptions, researchers conducted a Pearson correlation analysis on the data collected, following the emphasis on gender role expectations in educational choices (Löffler & Greitemeyer, 2023).

**2.2 Participants**

Two hundred students from Occidental Mindoro State College (OMSC) participated in the study; students were from four disciplines: Criminology, Information Technology (IT), Midwifery, and Engineering. The researchers targeted a sample of approximately 90 males and 112 females to ensure gender composition in the fields of study. This method of gender balancing in different academic disciplines is essential in addressing the issues of gender concerns in academic fields, where they elaborate on the debates regarding gender roles and related cultural influences to academic and career choices (Artz et al., 2021).

**2.3 Data Collection**

Data collection took place using a structured questionnaire using the online platform via Google Forms. The purpose of the questions was primarily quantitative and concerned the students' study program choices, study subjects, levels of self-efficacy, and attitudes towards gender, which echo within education. To maintain the credibility of the questionnaire, the researchers took several steps. They created questionnaire items informed by literature reviews and expert opinions in gender and educational psychology to ensure content validity. To ensure construct validity, they pre-tested the questionnaire on a small group of students, making several constructive adjustments based on the feedback received. This process allowed them to capture the variables of interest accurately. This approach argued that the researchers constructed the research variables to achieve face validity. The study conforms with the methodologies highlighted the need to evaluate research tools in order to assess the stereotypes of gender and the effects they have on the education system (Priyashantha et al., 2023).

**2.4 Data Analysis**

The information about the courses practiced and how many students were analyzed was collected using SPSS. This software uses both primary and secondary analysis to assist the users. Some tables presented the demographics while participants had moderate physical activities within the norm. Therefore, the researchers used t-tests and ANOVA to determine gender differences in course-taking and its factors. Participants' gender connection with their educational achievement was analyzed using statistical correlation, Pearson r. In their papers, educators support these findings regarding gender differences in academic perception (Farhane-Medina et al., 2022) and gender gaps in STEM (Tandrayen-Ragoobur & Gokulsing, 2022).

3. results and discussion

**3.1 Gender Influences Students' Choice Of Course in the Criminology, Information Technology, Midwifery, And Engineering Programs.**

Table 1 shows the gender distribution of students across four academic programs: Criminology, Information Technology, Midwifery, and Engineering. Out of 202 students surveyed, 90 are male and 112 are female. Information Technology has the highest enrollment, followed by Midwifery, which has the lowest. The Midwifery program is predominantly female, while the other programs have a more balanced male-dominant distribution. Out of 25 students enrolled, 13 are male and 12 are female. The data indicates a significant gender imbalance in the Midwifery program.

The study showed that gender and course selections in different programs were affected by several factors. For instance, Criminology seemed to have an equal sex ratio as males and females were attracted to this study area. The same applied to information technology, which showed that an equal number of men and women qualified for the program, which is a step forward in addressing gender disparities in the field. Even with this, the larger male population could still be a reflection of the traditional stereotypes that are associated with male-oriented environments. In contrast, Midwifery was still primarily female, reinforcing typical gendered occupations in certain areas. Engineering behaved similarly regarding male and female participation, recording equal numbers of respondents.

Such findings, taken as a whole, made the point about the universality of policies aimed at gender inclusiveness in all areas of activity, leaving the possibility of interest and abilities defining students' program selection. (Kugler et al., 2021) argue that children's socialization into dominant gender roles may be a fundamental factor in gender differences in selecting specific fields of study. This phenomenon is particularly evident in Midwifery, a discipline that firmly upholds traditional gender roles. In Criminology and Engineering, however, more or less equal numbers of male and female students were found, which indicates some degree of gender equality. examined the scientific literature on gender characteristics in studying science/technics. It reported some changes in perceptions but differences in students' education experiences (Putri et al., 2024).

**Table 1. Student Distribution by Gender and Program Choices**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Gender** | **Criminology** | **Information Technology** | **Midwifery** | **Engineering** | **Total** |
| MaleFemaleTotal | 131225 | 444185 | 43034 | 292958 | 90112202 |

Table 2 shows the Chi-Square Test of Independence arises at the Occidental Mindoro State College (OMSC), where it determines whether students' sex determines the course among Criminology, Information Technology, Midwifery, and Engineering on offer. From the base of 202 students, 44.6% males and 55.4% females, gender has significantly affected course selection, Pearson Chi-Square 17.844 and p = 0.000 (p < 0.05). Results validate that; indeed, sex does affect the selection of a course. One may appreciate that Criminology and Engineering takes in both males and females effectively. In contrast, females are, however, in more significant numbers in Information Technology. 4 of the 34 Midwifery students are males against 30 female students, indicating the gross femininity of that profession. It appears that even though the totality of the statistics points towards significance, the tendency is that there is more to the picture between gender and course choice other than linear correlation. The expected counts of the chi square test were, however, as appropriate as they ought to have been, reinforcing the credibility of these findings. These findings imply that gender is one of the factors influencing the choice of a specific course, and differences in the field of Midwifery are most striking. These ways can assist OMSC in advancing gender balance policies and solving the problem of differences in the number of students who enroll in the courses, especially those with distinct gender biases.

Gender had a crucial impact on students' program choices, as indicated by the Pearson Chi-Square and the Likelihood Ratio tests. This significant association proposed that there existed a genuine relationship between gender and the program that was selected. The lack of any directional linear trend depicted that the relationship may have been more complicated than a simple linear association. This finding on the preference of course by gender was consistent with larger patterns seen in education, where balancing factors included the level of choice and the course taken in gender relations. The lack of a significant by-linear association meant that additional factors such as culture, society, and preference may have complicated the relationship between gender and program choice. (Eli & Lalla Aisha Sidi Hamou, 2022) Explored the reasons behind students' selection of English Studies as a field of study and stressed the importance of the norms and family in the decision to pursue it.

**Table 2. Crosstabulations of Students by Gender and Program Choices**

|  |  |  |  |
| --- | --- | --- | --- |
|  | **Value** | **df** | **Asymptotic Significance (2-sided)** |
| Pearson Chi-SquareLikelihood RatioLinear-by-Linear AssociationN of Valid Cases | 17.844a20.249.845202 | 331 | .000.000.358 |

a. 0 cells (0.0%) have an expected count of less than 5. The minimum expected count is 11.14.

**3.2 Students’ perceptions and attitudes toward gender roles significantly influence their choices in their fields of study.**

The analysis of variance investigates the students' attitudes toward gender issues depending on the areas of study in six different survey questions. The results indicate that most questions present little differences concerning the statistical data in the groups. For instance, the ideology that some subjects are more appropriate to be carried out on a specific gender (F-value = 2.034, P = 0.110), the participation in gender stereotype events (F-value = 1.259, P = 0.290), gender influence upon the way somebody teaches (F-value = 1.647, P =0.180). Interactions with peers on gender roles (F-value = 0.812, P = 0.488) do not vary much within the sample. On the other hand, the answers to the question of how gender stereotypes affect the degree of readiness for discussion in class revealed significant discrepancies: it turned out that women and men across the different disciplines are affected by gender stereotypes on participation to different levels (F-statistics = 4.204, p = 0.007). The research means that people understand gender equity concepts similarly within specific fields. However, there are differences in the perceptions of gender effects in classroom participation due to gender biases. These tools may support action and further work addressing gender-related perceptions in the learning environment.

From the analysis represented in Table 3, it became clear that there were no notable variations in students' perceptions and attitudes towards gender and its roles in their education among the various groups of students. This observation drew attention to the general agreement or similar events around the students in the case study, irrespective of the course. examined how in-service physical education teachers are shaped by gender stereotypes in their expectations and practices (Preece & Bullingham, 2022). They demonstrated how pervasive gender stereotypes can determine teachers' methods and pupils' understanding. This study captured similar findings, showing that gender stereotypes prevent students from fully assimilating into class discussions and their roles. However, the study found no significant differences in perceptions regarding how gender stereotyping primarily occurred through course materials or lectures. It supports the idea that students from different programs share similar perceptions about the presence or absence of gender stereotyping in the content.

**Table 3. Perception and Attitude regarding Gender Roles**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Sum of Squares** | **df** | **Mean Square** | **F** | **Sig.** |
| 1. Participants report varying frequencies in their belief that certain academic courses are inherently more appropriate for one gender over another. | Between Groups | 8.117 | 3 | 2.706 | 2.034 | .110 |
| Within Groups | 263.354 | 198 | 1.330 |  |  |
| Total | 271.470 | 201 |  |  |  |
| 2. Students often encounter gender-based stereotypes within the context of their academic discipline. | Between Groups | 3.571 | 3 | 1.190 | 1.259 | .290 |
| Within Groups | 187.266 | 198 | .946 |  |  |
| Total | 190.837 | 201 |  |  |  |
| 3. There is a perceived influence of student gender on instructors’ teaching methods and expectations within the course. | Between Groups | 6.415 | 3 | 2.138 | 1.647 | .180 |
| Within Groups | 256.991 | 198 | 1.298 |  |  |
| Total | 263.406 | 201 |  |  |  |
| 4. Peer discussions on gender roles and stereotypes occur with varying frequency among students within their field of study. | Between Groups | 2.902 | 3 | .967 | .812 | .488 |
| Within Groups | 235.830 | 198 | 1.191 |  |  |
| Total | 238.733 | 201 |  |  |  |
| 5. Students recognize that gender stereotypes influence the degree of participation and engagement in classroom discussions. | Between Groups | 14.656 | 3 | 4.885 | 4.204 | .007 |
| Within Groups | 230.101 | 198 | 1.162 |  |  |
| Total | 244.757 | 201 |  |  |  |
| 6. Course content, including lectures and instructional materials, is perceived to perpetuate traditional gender stereotypes to varying extents. | Between Groups | 4.997 | 3 | 1.666 | 1.661 | .177 |
| Within Groups | 198.588 | 198 | 1.003 |  |  |
| Total | 203.584 | 201 |  |  |  |

**3.3 Impact of Societal, Cultural, and Familial Factors**

The data presented in Table 4 demonstrates the relationships between the student's course selections and societal, cultural, and family-related parameters. The findings demonstrate a case of perfect "Family Influence" and "Course" relationship owing to the repeated instances of the course data whereby, however, a notable moderate positive relationship (r = .495) between family influence and course choice is evident, which indicates that family expectations affect the decision of the students considerably. Norms and customs also show a moderate level of square points with the course selection decision (r = 495), indicating that students who hold these beliefs are predisposed to choose courses regarded as politically correct. Patients demonstrate a strong correlation with cultural polygons (r= . 553) and gender role people (r= .542); therefore, culture intersecting with other societal factors is no easy task.

The media portrayals of professionals have the least significant relationship with the choice of courses taken (r = 0.235), which suggests a relatively minor role in this respect when compared to family or cultural issues. Still, it plays a role in normalizing societal responses as well. However, researchers found that community support moderately correlates with course selection (r = 0.39). It was highly correlated with cultural norms (r = 0.552), suggesting that cultural expectations by community members significantly affect students. Cultural factors (r = 0.411) and gender role models (r = 0.415) seem to exhibit moderate positive relationships with course choice, which goes a long way to show that learners will base their choices of courses on societal dictates and role models. To conclude, these results demonstrate a different aspect of relations addressing influences on students' choices in courses and constructions of gender stereotypes whereby family and community concerns, culture, and gender, and their interplay, are what needs to be understood when it comes to making choices in an educational context.

Furthermore, table 4 emphasizes the interrelations between social, cultural, and family determinants affecting students' preferences for specific courses. Family influence closely relates to cultural beliefs, customs, and gender role models, indicating that an individual's family background determines academic choices. Examined how gender and personality-diverse students perceived elements of educational gamification, including game design components, and its influence on students' attitudes toward game design elements [24]. Their analysis proposed that within gender division, educational practices may have influenced students' learning tools and strategies in meaningful ways that affected their program choice and academic success. Researchers developed this idea to include gender differences in the perception of safety within public spaces, stating that safety also influences the choice of study in some ways (Navarrete-Hernandez et al., 2021).

Additionally, Cultural Beliefs and Traditions showed significant associations with Cultural Norms and Gender Role Models, demonstrating that such cultural aspects also went deep within the students' constructs of gender and gender-based academic choices. While Media representation of professionals had a low correlation with the other variables, it implied that media representation may have played less of a role than family and culture. Researchers also found that community support and cultural norms correlate well with gender role models in that community and culture, as primary contexts provide some of the stereotypes of the gender roles to which students are exposed and internalize. On the other hand, Gender Role Models had the most substantial relationship with the cultural norm of a community, suggesting the high level of impact that members of society have on the attitudes and aspirations of students. Hence, researchers foresaw that if educationalists, policymakers, and others understood these relationships, they would target promoting positive change in decision-making, especially among students.

**Table 4. Impact of Societal, Cultural, and Familial Factors**

|  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- |
|  | **Family Influence** | **Cultural beliefs and Traditions**  | **Media Portrayals of Professionals**  | **Community Supports**  | **Cultural Norms** | **Gender of Role Models**  | **Course** |
| Family Influence | Pearson Correlation | 1 | .495\*\* | .235\*\* | .390\*\* | .411\*\* | .415\*\* | 1 |
| Sig. (2-tailed) |   | 0.000 | 0.001 | 0.000 | 0.000 | 0.000 |   |
| N | 202 | 202 | 202 | 202 | 202 | 202 | 202 |
| Cultural Beliefs and Traditions  | Pearson Correlation | .495\*\* | 1 | .435\*\* | .480\*\* | .553\*\* | .542\*\* | .495\*\* |
| Sig. (2-tailed) | 0.000 |   | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |
| N | 202 | 202 | 202 | 202 | 202 | 202 | 202 |
| Media Portrayals of Professionals  | Pearson Correlation | .235\*\* | .435\*\* | 1 | .453\*\* | .427\*\* | .396\*\* | .235\*\* |
| Sig. (2-tailed) | 0.001 | 0.000 |   | 0.000 | 0.000 | 0.000 | 0.001 |
| N | 202 | 202 | 202 | 202 | 202 | 202 | 202 |
| Community Supports | Pearson Correlation | .390\*\* | .480\*\* | .453\*\* | 1 | .552\*\* | .420\*\* | .390\*\* |
| Sig. (2-tailed) | 0.000 | 0.000 | 0.000 |   | 0.000 | 0.000 | 0.000 |
| N | 202 | 202 | 202 | 202 | 202 | 202 | 202 |
| Cultural Norms  | Pearson Correlation | .411\*\* | .553\*\* | .427\*\* | .552\*\* | 1 | .651\*\* | .411\*\* |
| Sig. (2-tailed) | 0.000 | 0.000 | 0.000 | 0.000 |   | 0.000 | 0.000 |
| N | 202 | 202 | 202 | 202 | 202 | 202 | 202 |
| Gender Role Models | Pearson Correlation | .415\*\* | .542\*\* | .396\*\* | .420\*\* | .651\*\* | 1 | .415\*\* |
| Sig. (2-tailed) | 0.000 | 0.000 | 0.000 | 0.000 | 0.000 |   | 0.000 |
| N | 202 | 202 | 202 | 202 | 202 | 202 | 202 |
| Course | Pearson Correlation | 1 | .495\*\* | .235\*\* | .390\*\* | .411\*\* | .415\*\* | 1 |
| Sig. (2-tailed) |   | 0.000 | 0.001 | 0.000 | 0.000 | 0.000 |   |
| N | 202 | 202 | 202 | 202 | 202 | 202 | 202 |
| \*\*. Correlation is significant at the 0.01 level (2-tailed). |
| \*. Correlation is significant at the 0.05 level (2-tailed). |

**3.4 Students perceive the level of gender inclusivity and equality in their respective courses at OMSC**

The measures of central tendency and variability and the independent samples t-test offered insight into the extent to which Occidental Mindoro State College (OMSC) students identify the necessity of gender inclusivity and equality in the courses offered. There existed no significant differences between the groups for most questions along the inclusive–exclusionary continuum, such as whether students believed that their course offered inclusion, whether respondents had encountered discrimination based on gender, or whether they thought that gender issues within institutions of higher learning were well handled. Levene’s Tests mainly reported no significant statistical deviations between groups for this analysis. In contrast, t-tests recorded p-values less than the conventional alpha level of 0.05 in many cases, indicating conformity among student groups. Even so, researchers found one exception among students who believe their institutions take adequate measures to address research gaps on gender equity. In this case, they noted a significant difference with a p-value of 0.042, indicating that students had different ideas about the practicality of these activities. It means that even though students generally hold similar perceptions towards curbing inclusivity and equality within a college setting, students hold different views regarding the extent to which institutional measures towards curtailing gender discrimination in colleges have addressed the concerns, suggesting a possible area of focus.

Instead, Table 5 showed that while gender inclusivity and gender equality had broad agreement, there were potential discrepancies in attitudes towards the effectiveness of the institution's actions concerning gender equality promotion. This divergence justified external and internal examinations regarding the institution's gender equality policies or their conveyance to the public. Examined how university students perceive their self-related efficacy concerning the Sustainable Development Goals (SDGs) and how aspects of gender influence the framing of students' targets and self-efficacy towards social objectives. This aspect was particularly salient in the discussion of this study, where researchers found that gender affected students' aspirations and expectations regarding their careers, leading to perception biases that made some students lack self-belief in achieving their career ideals (Ferrando et al., 2024). Likewise, the analysis revealed no noticeable divergence concerning the perceptions on whether course content and pedagogy promoted an inclusive atmosphere for all sexes, which meant that students from diverse backgrounds were assumed to agree on the inclusive nature of their academic setting. Moreover, all groups showed similar experiences of gender-based discrimination; in other words, no such differences were evident among the students under consideration. The relative uniformity in student views concerning the effect of some institutional policies meant that they held the same views that such policy changes would make no impact or minimal effect. Researchers found no significant difference in perceptions regarding leadership opportunities, suggesting that all gender groups viewed them as available. On the one hand, these findings suggested a considerable agreement about most of the issues related to gender inclusion and equality at the institution. On the other hand, there was a vast gap concerning how each group viewed the effectiveness of interventions by the institution towards the attainment of gender balance. Consequently, the analysis showed that while there were some variations and similarities in how students understood and internalized gender roles and stereotypes in the educational setting, the only significant statistical difference pointed out the perception that stereotypes act as barriers to participation in class debates.

**Table 5. Gender Inclusivity and Equality**

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **F** | **Sig.** | **T** | **Df** | **Sig. (2-tailed)** | **Mean Difference** | **Std. Error Difference** | **95% Confidence Interval of the Difference** |
| **Lower** | **Upper** |
| 1. The academic program I am enrolled in provides an inclusive environment for individuals of all gender identities. | Equal variances assumed | .208 | .649 | -.893 | 200 | .373 | -.141 | .158 | -.453 | .170 |
| Equal variances are not assumed. |  |  | -.892 | 190.254 | .373 | -.141 | .158 | -.453 | .171 |
| 2. I have not encountered any form of gender-based discrimination with my course. | Equal variances assumed | 1.667 | .198 | -.015 | 200 | .988 | -.003 | .174 | -.345 | .340 |
| Equal variances are not assumed. |  |  | -.015 | 183.644 | .988 | -.003 | .175 | -.348 | .343 |
| 3. I believe that the policies implemented by Occidental Mindoro State College (OMSC) effectively address gender inclusivity. | Equal variances assumed | 1.124 | .290 | .021 | 200 | .983 | .003 | .140 | -.274 | .280 |
| Equal variances are not assumed. |  |  | .021 | 197.149 | .983 | .003 | .139 | -.271 | .277 |
| 4. OMSC’s initiatives and programs aimed at promoting gender equality are effective and impactful. | Equal variances assumed | .145 | .704 | -2.051 | 200 | .042 | -.270 | .132 | -.530 | -.010 |
| Equal variances are not assumed. |  |  | -2.047 | 189.297 | .042 | -.270 | .132 | -.530 | -.010 |
| 5. My academic course fosters equal access to leadership opportunities, regardless of a student’s gender. | Equal variances assumed | 1.044 | .308 | .708 | 200 | .480 | .106 | .149 | -.189 | .400 |
| Equal variances are not assumed. |  |  | .717 | 198.307 | .474 | .106 | .147 | -.185 | .396 |
| 6. I am satisfied with the gender inclusivity measures currently implemented at my institution. | Equal variances assumed | 2.431 | .121 | -.276 | 200 | .783 | -.038 | .139 | -.312 | .236 |
| Equal variances are not assumed. |  |  | -.281 | 199.500 | .779 | -.038 | .136 | -.307 | .231 |

**3.5 Gender influences students' career aspirations and expectations in their chosen fields of study**

The research investigates how gender affects the career plans and expectations of students. It revealed that males are more likely than females to feel the impact of gender on career aspirations and goals, while both females and males score 2.74 in both measures. Male and female respondents do not differ in their beliefs about the effect of gender on salary; males scored a mean of 2.76, while females scored a mean of 2.74. More women, rather than men, expressed confidence that they could achieve their career goals even with gender discrimination in the workplace. Most women agree that constraints will be imposed due to gender bias but will pursue careers as planned. Most, however, were neutral about the impact of gender biases in the future, with male means at 3.14 and 3.21 for females. In summary, males, on the whole, tend to have a more excellent perception of gender influence within career aspirations and advancement. In contrast, females tend to be more assertive towards overcoming gender-related obstacles.

According to Table 6, it was evident that gender had some influence on career aspirations and expectations. However, the degree of such influences differed depending on gender and other career-related factors. For instance, males appeared to perceive a more significant role of gender in career progression and aspirations than they deserved. At the same time, females expressed greater optimism that they could achieve their career aspirations regardless of gender discrimination (Lopes et al., 2024), in whose case the respondents' gender was examined concerning the use of Artificial Intelligence in academic research, finding differences in perceptions towards Children's potential and AI. Such gender stereotypes may impact academic performance and the decision to switch courses and within which support systems are perceived, again calling for focusing on these biases and their mitigation strategies.

Both groups' Chinese gender analysis belittled the crisis of salary expectations and career prospects in the future. Predictably, males recorded a mean score of 2.99. In contrast, females recorded 2.74, which signifies that both groups believed that gender would have some effect on their future career aspirations, with males seeing more of this. Males and females equally had means as high as 2.11, which shows that most of them thought there would be no gender discrimination in their salary prospects. In contrast, females' mean response (3.81) was higher than males' (3.47), showing that females were more optimistic about accomplishing their career goals despite the challenges imposed by gender bias.

On the other hand, males gave a mean response of 3.41(mean). In contrast, females gave 3.12(mean), arguing that males were more inclined to the view of gender depending on career advancement, perceiving it as a barrier or facilitator. In the end, there were effects due to gender in the perceptions of career aspirations and expectations; however, there were differential effects of this in terms of gender and career-associated factors. As stated earlier, all the factors behind the gender gap in salaries were most important to both males and females in their current and future careers. It points to the current attempts at a gender imbalance in the labor market.

**Table 6. Career Aspirations and Expectations**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | **Gender** | **N** | **Mean** | **Std. Deviation** | **Std. Error Mean** |
| 1. The individual perceives that their gender significantly influences their current career aspirations. | Male | 90 | 3.11 | 1.146 | .121 |
| Female | 112 | 2.74 | 1.038 | .098 |
| 2. The individual acknowledges that their gender plays a role in shaping their future career aspirations. | Male | 90 | 2.99 | 1.195 | .126 |
| Female | 112 | 2.74 | 1.097 | .104 |
| 3. The individual believes that their gender will have an impact on their expected salary within their chosen profession. | Male | 90 | 2.76 | 1.221 | .129 |
| Female | 112 | 2.74 | 1.055 | .100 |
| 4. The individual expresses confidence in attaining their career objectives regardless of prevailing gender-related biases. | Male | 90 | 3.47 | 1.030 | .109 |
| Female | 112 | 3.81 | 1.018 | .096 |
| 5. The individual perceives that their gender will influence the trajectory of their career advancement within their selected field. | Male | 90 | 3.41 | .886 | .093 |
| Female | 112 | 3.12 | 1.046 | .099 |
| 6. The individual frequently reflects on how gender biases may potentially affect their future professional endeavors. | Male | 90 | 3.14 | 1.055 | .111 |
| Female | 112 | 3.21 | .944 | .089 |

**3.6 Barriers and Challenges Due to Gender Biases**

The correlation results illustrate the extent to which gender discrimination affects students. Students faced with difficulties attributed to gender stereotypes demonstrate positive correlations with the belief that gender stereotypes affect their studies (r = 0.433, p < 0.01), wish to change their degrees (r = 0.628, p < 0.01), wish to believe that such biases are lessening (r = 0.325, p < 0.01), wish to prove themselves, as they perceive the necessity of doing so for the efficient completion of assignment (r = 0.424, p < 0.01), and regard support (r = 0.250, p < 0.01). The performers who consider these biases other than their own to hamper their performance also have a significant correlation with considering and changing courses (r = 0.423, p < 0.01), perceived reducing values of biases (r = 0.381, p < 0.01), and working more than was expected from them (r = 0.511, p < 0.01). At the same time, the association with the support system remains tenuous (r = 0.182, p < 0.01). For students contemplating transferring courses, correlation showed positive findings with the perception of a reduction in biases (r = 0.434, p < 0.01), preparation to put excessive efforts (r = 0.424, p < 0.01), and proposition and availability of support systems (r = 0.233, p < 0.01).

The perception of diminishing biases is positively associated with additional efforts (r = 0.380, p<0.01) and support systems (r = 0.408, p<0.01). Furthermore, perceptions of support systems are more robust and result in the perception that there is a need to work harder (r = 0.356). These correlations further suggest that gender-related expected biases are closely related to educational achievement, course selection, and perceptions regarding support systems.

Ultimately, Table 7 examined gender biases and academic performance, course choice, and the perception of support systems and reported significant correlations. There was a moderate statistical association between gender biases and overall performance, which indicated that perceived biases may shape the academic direction of a given group of students. Researchers also found that students who perceive more significant gender biases tend to experience deteriorating academic performance due to these additional concerns. There was a breakthrough in terms of the relationship between gender biases and the chances of changing course, whereby changing course seemed to be dependent on gender biases perceived by students; the higher the level of gender bias, the higher the chances of a course change. Such observations meant that gender biases, for example, would always create discomfort and even satisfaction within the learning environment, making studies look for other options (Esther & A.P.M.E, 2024). It also supported these observations and emphasized how academic decisions made by students can be affected by gender biases and their perception of areas of assistance.

Further, a weak positive correlation was also found between gender biases and the perception that bias in the form of gender-based work discrimination was declining, implying that those students who accepted the existence of such discrimination might also have acknowledged existing such efforts or changes within the institutions. Researchers also noted a positive correlation regarding gender biases. They perceived that student felt they had to prove themselves more than others, meaning that among those who perceived gender biases, more students believed they needed extra effort to achieve objectives that other children could accomplish with their regular effort due to certain limitations imposed on them. There was also a weak to moderate positive relationship found between gender biases and sufficient support systems provided, meaning that most students who reported that they experienced such biases considered the support provided to them as relatively low. It would have brought to the fore the urge for institutions to tweak their support systems as measures to mitigate the negative impact of gender biases. Ultimately, it was apparent that academic performance was related to how students perceived gender and gender bias and how they reacted since correlations were evident between gender biases and various other variables.

**Table 7. Barriers and Challenges Due to Gender Biases**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
|  | **Gender Biases** | **Academic Performance** | **Changing Course** | **Gender Biases are Decreasing** | **Work harder than Peers** | **Sufficient Support Systems** |
| Gender Biases | Pearson Correlation | 1 | .433\*\* | .628\*\* | .325\*\* | .424\*\* | .250\*\* |
| Sig. (2-tailed) |  | .000 | .000 | .000 | .000 | .000 |
| N | 202 | 202 | 202 | 202 | 202 | 202 |
| Academic Performance | Pearson Correlation | .433\*\* | 1 | .423\*\* | .381\*\* | .511\*\* | .182\*\* |
| Sig. (2-tailed) | .000 |  | .000 | .000 | .000 | .009 |
| N | 202 | 202 | 202 | 202 | 202 | 202 |
| Changing Course | Pearson Correlation | .628\*\* | .423\*\* | 1 | .434\*\* | .424\*\* | .233\*\* |
| Sig. (2-tailed) | .000 | .000 |  | .000 | .000 | .001 |
| N | 202 | 202 | 202 | 202 | 202 | 202 |
| Gender Biases are Decreasing  | Pearson Correlation | .325\*\* | .381\*\* | .434\*\* | 1 | .380\*\* | .408\*\* |
| Sig. (2-tailed) | .000 | .000 | .000 |  | .000 | .000 |
| N | 202 | 202 | 202 | 202 | 202 | 202 |
| Work harder than Peers | Pearson Correlation | .424\*\* | .511\*\* | .424\*\* | .380\*\* | 1 | .356\*\* |
| Sig. (2-tailed) | .000 | .000 | .000 | .000 |  | .000 |
| N | 202 | 202 | 202 | 202 | 202 | 202 |
| Sufficient Support Systems | Pearson Correlation | .250\*\* | .182\*\* | .233\*\* | .408\*\* | .356\*\* | 1 |
| Sig. (2-tailed) | .000 | .009 | .001 | .000 | .000 |  |
| N | 202 | 202 | 202 | 202 | 202 | 202 |
| \*\*. Correlation is significant at the 0.01 level (2-tailed). |

4. Conclusion

The study references further highlight how important gender as a variable is in determining which programs students select, academic environments in which students exist, and future professions students wish to explore. The assessment shows that some professions, such as criminology and engineering, are achieving more significant gender equity, while the midwifery field still exhibits more gender stereotypes. This binary distinction between gender and program choice, as well as the problematic nature of program choice under the cardboard of culture and social order, constructs that offer Spanish l reset – all this compels one to suggest further measures to overcome gender bias in all branches of education. In as much as the students' attitudes toward gender roles and stereotypes do not vary significantly among the groups, there are gender stereotypes about academic achievement, course enrollment, and even the available support. Gender stereotypes affect students' choice of academic courses and their views towards institutional practice on gender equity policies. As per the literature review, the perspectives generally assured students of inclusive academic spaces; however, women still experienced differences in how well educational institutions practiced gender equality. To understand these issues, educational institutions must pay special attention to gender mashup program options, deconstruct conventions of masculine and feminine roles, and, most importantly, consider gender issues in career development. There is a need to strengthen the support systems as well as the capacity of the interventions to reduce the adverse effects of gender bias. Schools should further ensure that there are proper procedures in place to counter and eliminate any gender stereotypes present in the syllabus, teaching methods, and interaction with students in order to help create an inclusive social atmosphere. By understanding these challenges, institutions can assist students in breaking the chains of gender, which will positively impact their learning and professional growth.

Ethical approval

 “All authors hereby declare that all experiments have been examined and approved by the appropriate ethics committee and have therefore been performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki.”

Consent:

The research preserves participants' anonymity, ensuring that case studies do not reference cultures of opposition or other individuals in some studies, as required by regulatory documents. At this stage, all participants were involved in the study after consent was sought, thus convincing the respect, care, and protection of participants and ethical principles.

**Disclaimer (Artificial intelligence)**

Author(s) hereby declare that NO generative AI technologies such as Large Language Models (ChatGPT, COPILOT, etc.) and text-to-image generators have been used during the writing or editing of this manuscript.

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