Millennium Journal of Humanities and Social Sciences (MJHSS)
ISSN: 2708-8022 (Online), 2708-8014 (Print)
Vol. 4, Issue 1, January 2023
https://doi.org/10.47340/mjhss.v4i1.1.2023

The Effect of Gender Inequality on Job Satisfaction, Productivity, and Career Progression of Female IT and Software Professionals

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Abstract

With technological advancement and the sudden shift in the need for a consistent online presence due to the COVID-19 pandemic, the IT and Software industry continues to grow as a valuable and competitive profession. Albeit this industry's significant contribution to the country's development, it continues to be dominated by men. Hence, a study involving a total of 204 female IT and software professionals in the Philippines aged 18-65 was conducted to examine the effects of gender inequality on their job satisfaction, productivity, and career progression. By using exploratory factor analysis and structural equation modeling (SEM), results show that the perception or experience of gender inequality leads to less satisfied and less productive employees, which further translates to the determination to grab the opportunity to progress in their careers. Notably, gender inequality creates a positive effect on one's motivation for career progression. Despite this study's limitations, its findings will provide significant insights for Human Resource practitioners on how to properly manage a growing workforce in a male-dominated industry and ensure that they are satisfied with their jobs, productive, and can pave the way for advancement in their careers.

Keywords*:* Gender Inequality, Job Satisfaction, Employee Productivity, Career Progression, IT and Software, Female Professionals, Minority, Social Exchange Theory

1. Introduction

The pandemic has severely affected many lives for the past two years, driving both the economic forces and the healthcare industry downwards. Massive changes occurred due to the COVID-19 outbreak. People were stuck at home, thus shifting the home, school, and workplace setup. The study's primary purpose is to explore and discuss the effects of perceived and actual experiences of gender inequality on the job satisfaction, productivity, and career progression of female IT and software professionals in the context of the pandemic. Through this, the researchers will be able to study in-depth and understand what has changed in the working dynamics of sexes since it is still evident that women are seen and expected to act a certain way: to stay at home and take care of the children. On the other hand, men are expected to go out and provide the family with all the necessities but, as the new normal and the progressively changing times continue, women are now slowly making their way up the ladder and establishing a name for themselves in various fields and practices. As women develop their skills, their capability to excel in their respective practices rises with them, sending the

message that women nowadays are capable of performing as equals of men; and in other instances, better than men, disrupting traditional office work engagement, hence, the contribution in the digital revolution and advancements.

The researchers emphasize why IT—the digital revolution—has prospered and increased growth within the business, market, various industries, and the economy due to the effects of the unprecedented crisis. Since the digital transformation has garnered equitable benefits from middle to low-income countries, the tech industry has become more significant than ever (Wajcman et al., 2020). AI technologies and e-commerce progress towards better commercial transactions, more accurate information collection and processing, and reduced communication and business costs. With the estimated percentage of the demand for IT professionals increasing as a result of technological advancements, career opportunities in the tech sector have increased; thus, the need for digital skills to be more of a transformative approach to changing the narrative that "technology is for boys" and that the field of study and career paths could champion and empower women.

Despite the growing benefits of digital advancements, “women, on a global average, have less understanding of technology,” fewer computer-based skills, and are less likely to have possession of mobile or technological devices and other techno-social capabilities in some specific parts of the world to be able to compete in the global context. These hurdles in digital literacy consist of accessibility and affordability challenges, their lack of education, and other relevant socio-cultural norms that increase the skills divide, which constructs gender inequality (Robertson & Ayazi, 2019). Moreover, the “lack of women in the high-tech sector, particularly in leadership positions,” exhibits risks and manifests gender inequalities (Wajcman et al., 2020). With that, it becomes evident in the said tech industry that the crucial implications of inherently patriarchal and ambiguously liberating characteristics of technology leading to noticeable pay gaps and significant disparities when it comes to opportunities in terms of career progression.

The researchers opted for the topic since it piqued their curiosity regarding the consequences of the pandemic with relevance to workers’ job satisfaction, productivity, career progression, and the gender inequality cases that come with it. Some noticeable gaps from the related literature gathered are the following:

- Few studies discuss the perspective of each sex on gender inequality in the context of before and during the pandemic.
- The definition of variables may change over time hence the need for continuous research.
- Few studies regarding the impact of gender biases in connection to indicators of employee motivation towards a male-dominated profession since such laws and policies regarding gender inequality were just recently created and established.

1.1. *Objectives*

- To assess the perceived and actual experiences of gender inequality of female IT and Software professionals from various industries in the Philippines.
- To examine and explain how the employee’s sex affects her engagement in the workplace, which may lead to opportunities for career progression in relation to her productivity and job satisfaction.
- To develop a framework that accurately demonstrates the connection of gender inequality in the world of work and to use it as a basis for future recommendations of concerned professionals.

1.2. *Significance of the Study*

Considering the limited number of studies conducted about the field in the Philippine setting, the study aimed to contribute knowledge in the field of research concerning the presence of gender inequality in the field of IT. This may serve as a stepping stone to initiate more studies to be conducted in a Philippine context. Fueled by the curiosity brought by the presence of gender inequality, the study would help its participants by representing and understanding the experiences of female employees throughout their course of work who may

have been exposed to inequalities that may be contributory to their career progression. On the other hand, the study would be beneficial for management staff, Human Resource professionals, and other organizational authorities by contributing knowledge in addressing the possible existing inequalities in the profession. The study can gauge the presence of the said inequalities and how it affects the people within the profession. Lastly, the readers and future researchers who will encounter this paper may have an in-depth understanding of what has changed in the working dynamics of both sexes then and up to now, considering the gender inequalities that may be present. This may serve as a future reference for the current situation of the workforce in the IT and software profession, considering the presence of gender inequality.

2. Theoretical Background

2.1 *Theoretical Framework*

The Social Exchange Theory (SET) presents a possible conceptual foundation for understanding individual-work organization relationships by laying the groundwork for understanding the function of organizations and managers in instilling the feeling of responsibility and positive work attitudes into their employees (Ko & Hur, 2014). The reciprocity norm, which "obligates people to respond positively to favorable treatment received," is essential to this theory. SET is also supported by a psychological contract, whereby both the employer and employee implicitly agree to consider each other's needs and desires when doing things that affect the other. Therefore, to strengthen the established contract, both parties must continue to reciprocate resources beyond what is explicitly required by formal agreements. If the employer fails to fulfill the implicit contract, the employees' willingness to work beyond their job responsibilities will be reduced (Babic & Hansez, 2021). When an employee works in a favorable work environment, he feels "obligated to reciprocate by adopting a more positive attitude" in accomplishing his work, and when treatment is unfavorable, the opposite demeanor is expected from the employee (Ko & Hur, 2014).

In relation to this study, SET also explains how the workplace environment established by high-ranking individuals contributes to an employee's willingness to work productively while being satisfied with what they do. As men dominate the IT and software profession, both sexes may have experienced different treatment from management in their work which could contribute to what employees perceive as necessary factors to consider to fulfill their psychological contract with their employer, affecting how they produce their outputs and feel while doing so. Moreover, as the pandemic alters how work is done and how relationships are formed in the workplace, it may be harder to implicitly agree on what is expected from each employee from an employer's viewpoint. On the other hand, an employee's gender may elicit varying reactions from management when they accomplish beyond what they are expected to do if they assume that it is implied in their psychological contract. These may influence the employee's initiative to pursue actions that would advance their career.

2.2 *Review of Related Literature*

2.2.1 *Gender Inequality*

Gender inequality is the "ascriptive characteristic [people] are born with" and the inequality based on an individual's sex (Ferrant, 2015). Studies suggest that it has victimized women's success in the workplace which is hindered due to explicit and implicit biases. Moreover, it indicates that structural explanations tend to weaken the idea that there is an unequal status quo. Instead, the blame has been placed on disadvantaged individuals (Babic & Hansez, 2021). In view of the COVID-19 pandemic, this disproportionate treatment of women is further magnified (Nanthini & Nair, 2020). Along with this was the operational definition established by the researchers wherein the variable is referred to be perceived and actual experiences of both sexes regarding the unequal treatment in terms of rewards, recognition, power, and authority as well as other manifestations of workplace discrimination that occurs in a male-dominated industry. This shows that gender inequality is the denial of a person's full access to their human rights due to exclusion or restriction based on socially defined gender norms (Folami, 2017).

Both men and women desire intrinsic rewards such as interesting tasks, a sense of accomplishment, productivity, and knowledge that their work is valuable. Despite this, studies repeatedly show that women's jobs tend to have less variety and are segregated, therefore, affecting their job satisfaction (Crowley, 2013). According to prior studies, it is socially built in a gendered way, with women working in low-status jobs. Chan and Anteby (2016) believe that this affects employees' physical exertion, emotional labor, and relational strain, becoming a part of their assessment of job quality conceptualized as job satisfaction. Thus, it is hypothesized that:

H1: The more equal the treatment for each gender, the more satisfied the workers.

According to Wu and Cheng (2016), the driving force for small firms to grow is improving gender equality. It positively affects the performance of executives and specialized production workers considered high-skill employees. Once the firm expands, gender equality must be focused on low-skill employees, suggesting that to have an organization with a friendly and efficient working environment equipped with a sustainable, productive, and motivated human capital, high gender equality in an evenly distributed labor force must be practiced. Conversely, if gender inequality is present in an organization, productivity growth is hampered. Thus, we hypothesize that:

H2: The more equal the treatment for each gender, the more productive the workers.

2.2.2 *Job Satisfaction*

According to Babic and Hansez (2021), job satisfaction is usually "influenced by the favorableness of job conditions, largely independent of whether those conditions result from the employer's free choice." Additionally, Chan and Anteby (2016) defined job satisfaction as an overall affective response on the part of individuals to their jobs.

Studies have shown that "the lack of access to a mentor leads women to feel that they are excluded from communication" and with reduced chances to "exchange valuable strategic information, contacts, and recommendations." These factors consequently limit their opportunities for promotion (Cohen et al.., 2020). The results have indicated that the glass ceiling was directly related to job satisfaction and intention to quit. To further explain this, "when women managers perceive that their work interferes strongly and negatively with their family domain and causes difficulties in fulfilling family responsibilities," they are less likely to be satisfied with their job (Babic et al., 2015). As a result, they tend to reduce their level of engagement in their work (Babic et al., 2020) which hinders their career progression. Thus, it is hypothesized that:

H3: The more satisfied the workers, the more they are able and willing to progress in their careers.

2.2.3 *Employee Productivity*

According to Zhang, Liao, Li, and Colbert (2020), employee productivity is "the quantity of output that results from performance behaviors as well as external, contextual, and opportunity factors." Past studies (e.g., Abendroth and Dulk, 2011; Bloom and Van Reenen, 2006; Johari et al., 2018) have indicated that various factors such as work-life balance, autonomy, workload, and the work environment greatly influence organizational outcomes and are significant indicators of employee retention and productivity.

Studies also suggest that female participation in projects from a male-dominating profession is crucial because of underrepresentation and other problems of gender inequality. Not only does this affect their productivity but also their interest, engagement, and contribution to the projects and the community as a whole (Vasilescu et al., 2015; Mendez et al., 2018). Job performance is measured through employee productivity, therefore, offering flexible work hours, part-time work schedules, and telecommuting establishes that male-dominated industries are accessible to women with domestic responsibilities that may impact their career paths (Serenko and Turel, 2021). Thus, it can be assumed that:

H4: The more productive the workers, the more they are able and willing to progress in their careers.

2.2.4 *Career Progression*

Career Progression, also known as "Career Advancement or Gains," refers to the progress of achieving top positions and other career aspirations in an organization (Bowles et al., 2019). Career progression is different from, and is not limited to promotions, for it includes salary, authority, job duties, responsibilities, and even location. Presumably, all promotions are considered career progression, yet all instances of career progression do not only come in the form of promotions (Mwetulundila and Indongo, 2022).

Studies show that only a few women are given the opportunity to attain managerial positions. Literature evidenced that most societies today are still ruled by patriarchalism, resulting in social structures that may influence women's career mobility (Mwetulundila and Indongo, 2022). That being said, the glass ceiling, rooted in gender inequality, reduces access to job resources like information, social networks, learning opportunities, and performance feedback. It also diminishes women's personal character and dynamism in the work environment (Babic and Hansez, 2021). Gender has been a common hindrance to women's career progression resulting in women having difficulties taking an equal place in decision-making positions in the organization (Karmaker and Fatema, 2020). Thus, it is hypothesized that:

H5: The more equal the treatment for each gender, the more they are able and willing to progress in their careers

2.3 *The Hypothesized Model*

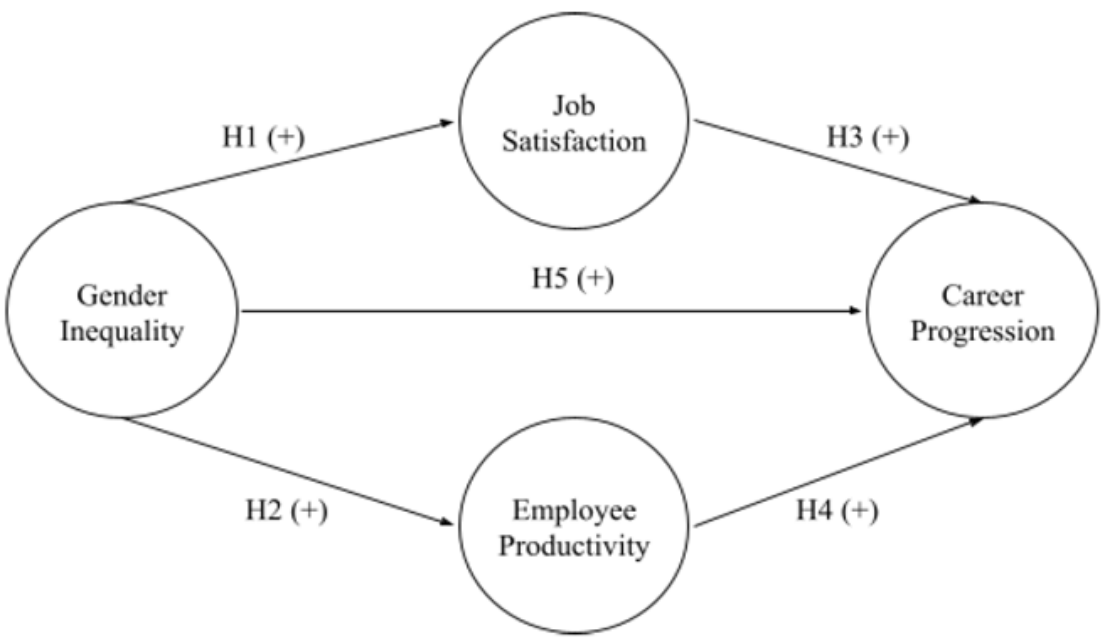

Figure 1. Conceptualized model depicting the effect of gender inequality on job satisfaction, productivity, and career progression of female IT and Software Development professionals

3. Methods

3.1 *Research Design*

The study used a quantitative approach to gather results by quantifying analysis variables. It utilizes the analysis of numerical data through statistical techniques to answer a study's questions (Apuke, 2017). To understand the pathways of how gender inequality affects job satisfaction, employee productivity, and career progression, the research design and data analysis tool used is Structural Equation Modeling (SEM). The two

components that comprise SEM include exploratory factor analysis (EFA), which determines the number of constructs and factor loadings of each item in the construct. Moreover, EFA is used to identify the underlying latent variables from the measured variables of this study. Therefore, this technique is useful and appropriate as the study had no prior hypothesis of the factors, nor are there patterns of measured variables (Liu, 2018). The latter is a path analysis that can be broken down into direct and indirect effect pathways. This model can show theoretical causal linkages to support a causal theory by providing evidence (Treanor, 2016).

An advantage of SEM compared to other methods is that it utilizes factor analysis and path analysis simultaneously since it can "measure and accommodate errors of observable variables", "represent ambiguous constructs in the form of hypothetical constructs or hidden variables by using several manifest variables", and "simultaneously estimate both causal relationships among latent variables and manifest variables" (Xiong et al., 2015). It can also evaluate and assess the relationships among constructs. Thus, the application of SEM is beneficial in representing connections within the research variables.

3.2 *Subjects and Study Site*

To satisfy the objectives of this study, the researchers used purposive random sampling and snowball sampling to reach the target respondents, which the researchers agreed upon even with the risk of it being a niche group. Respondents of the survey were female IT and Software professionals working in the Philippines with legal working ages ranging from 18 to 65. Female subjects were chosen for the study because of the industry they are in. Software and technology are one of the fastest-growing industries in 2022 according to the Management Development Institute of Singapore (2022). However, these industries continue to be dominated by men based on an article by Lakritz (2020) and Boe (2021). Respondents were mainly gathered from the National Capital Region as most IT or Software companies are located in this area. However, it wasn't limited to this as the survey instrument had been distributed through online means as well. The study site is extended to the whole Philippines to gather a larger sample of the niche group of qualified respondents.

The researchers agreed that it would be most appropriate and convenient that participants were informed of any potential dangers. However, in this case, these dangers were unlikely since most data were gathered online. More so, the questions were created not to pose any type of discomfort, inconvenience, or emotional turmoil. Lastly, to ensure the participants' safety, all data gathered were kept confidential, anonymous, and had been collected voluntarily. Besides their age, the demographics portion in the survey instrument that a company representative had gathered, included information about the respondent's educational background, marital status, number of children, position in the company, length of service in their current company, professional experience in the profession, and work setup. Employees who had been working in their current company and/or in the IT and/or software profession for less than 12 months were excluded from the study. The study focused on female respondents only and did not cover the responses of males and other genders.

Table 1. Demographic Characteristics of Female IT and Software Professionals (n = 204)

Profile	**n**	**%**	**Profile**	**n**	**%**
Age			**Educational Background**		
<30	135	66.2	Incomplete Higher Education	5	2.5
30-35	42	20.5	Bachelor's Degree	189	92.6
36-40	14	6.9	Master's Degree	7	3.4
41-45	7	3.4	Doctoral/Doctorate Degree	3	1.5
>45	6	2.9	Number of Children		
Marital Status			0	161	78.9
Single	168	82.4	1	22	10.8
Married	25	17.2	2	14	6.9
Widowed	1	0.5	3	7	3.4
			Professional Experience in the Profession		
Length of Service			<12 mos	23	11.3
<12 mos	42	20.6	1-2 yrs	39	19.1
1-2 yrs	60	29.4	3-4 yrs	45	22.1
3-4 yrs	58	28.4	5-6 yrs	35	17.2
5-6 yrs	20	9.8	>7 yrs	62	30.4
>7 yrs	24	11.8	**Position in the Company**		
Work Setup			Senior Management	6	2.94
Remote	59	28.9	Middle Management	31	15.2
On-site	52	25.5	Senior Staff	99	48.53
Hybrid	93	45.6	Rank and File	68	33.33

Table 1 depicts the demographic profile of the respondents. Among the 204 responses from female IT and/or Software professionals, more than half (135 or 66.2%) were less than 30 years old. Most of the respondents—189 of 204 (92.6%) had completed and acquired a Bachelor's Degree. With regard to the majority's marital status, 82.4% were single, and more than half of the respondents had no child (78.9%). Most of them had more than seven (7) years of professional experience in the industry garnering 30.4% or 62 respondents within the category. However, for the length of service rendered to their current company, the highest percentage (29.4%) belonged to the group that answered within the range of 1-2 years of service in which the majority answered a Hybrid work arrangement (93 or 45.6%). Narrowed down to 4 categories of career levels/job seniority or rank from collated job positions, garnering the highest percentage were those

female employees in a senior staff level job position with 99 or 48.53% of the total sample.

3.3 *Data Measures*

The survey instrument is composed of five major parts: demographics, gender inequality, job satisfaction, employee productivity, and career progression. All of the statements in the instrument were adapted from previous similar studies' survey instruments. These had been revised based on the results of validity and reliability tests. The validity test was done by having its content reviewed and assessed based on appropriateness in relation to the given variable in the context of the HR profession by subject matter experts, composed of three (3) tenured Human Resource professionals. Afterward, reliability and the internal consistency of the instrument were assessed through pilot testing in which a total of thirty-three (33) employees within the National Capital Region (NCR) were gathered to answer the survey. The instrument was reduced from eighty-five (85) to forty-seven (47) statements based on the test. The study used a Likert-type response scale labeled 1-6, in which, one (1) is labeled as "Strongly Disagree", while six (6) is labeled as "Strongly Agree". Hence, higher scores indicate a positive association. Each statement required participants to assess the extent to which they agree with each statement based on their experience or perception of such occurrences in their chosen profession.

3.3.1 *Demographics*

Demographic information such as age, educational background, marital status, number of children, position in the company, length of service in the company, and professional experience in the profession was collected through an online survey. This is based on two researcher-made tools from related studies.

Adapted in the survey questionnaire are eight (8) questions tackling the participant's age, educational background, marital status, number of children, position in the company, work setup, and both the length of service and overall professional experience of the respondent in the industry. These were asked to ensure that the participants of the study were fit to answer the survey questionnaire as well as distinguish them into categories. In consideration of the Philippine setup, age was grouped with a four (4) year range for each group, the first group was changed into "less than 30 years old" to include those who had already started their career in the IT and software profession as early as eighteen (18) years old since the researchers also considered those who have "incomplete higher education" as their educational background. Instead of having a range for the "number of children", it was formatted into a blank for the respondents to indicate the number accordingly, this statement is not vital in interpreting the results of the study but may be relevant for future reference. Moreover, an additional statement was added to determine the respondents' current work setup, which may be relevant to how they perceive or experience the given variables.

3.3.2 *Gender Inequality*

Gender Inequality was measured through the instrument prepared by the Athena Survey of Science, Engineering, and Technology (ASSET), managed by the Equality Challenge Unit. It has a 7-point Likert scale ranging from 1 (Strongly disagree) to 7 (Strongly agree) with twenty (20) statements corresponding to its factor groups which are "Discrimination based on Gender stereotypes and prejudices," "Gender orientation," "Workload and participation," and "Work-family." The Cronbach Alpha resulted in 0.90, which suggested that it was valid and reliable. Adapted from the actual survey questionnaire were fourteen (14) questions tackling the dimensions of Discrimination based on gender types as well as Workload and Perceived Marginalization, in which the researchers opted to adapt a 6-point Likert Scale to measure indicators within its spectrum. The researchers decided to eliminate some indicators since other factors, such as "work-family" and "gender orientation" broadened the scope of the study, which in turn might be insignificant. The finalized questionnaire for the section of Gender Inequality had a Cronbach alpha of 0.92. This portion of the instrument measured the extent to which the respondents experienced or perceived gender inequality in their workplace.

3.3.3 *Job Satisfaction*

The assessment of the extent to which the respondents were satisfied with their jobs was conducted by combining survey questionnaires from two articles from Martins and Proenca published in 2013, in which a 5-point Likert scale ranging from 1 (very dissatisfied with this aspect of my job) to 5 (very satisfied with this aspect of my job) with twenty (20) statements was used, and From Phuong and Vinh (2020), which also used a 5-point Likert scale ranging from 1 (totally disagree) to 5 (totally agree) with a total of six (6) statements. The Cronbach Alpha ratings were 0.91, 0.88, 0.86, and 0.95. All of the results showed that it had acquired good reliability. The researchers decided to retain most of the indicators from Martins and Proenca's article since the components showed better internal consistency. On the other hand, the components in the cluster that were dropped either from Phuong and Vinh's or Martins and Proenca's, had lower communalities. The finalized questionnaire for the section of Job Satisfaction had a Cronbach Alpha rating of 0.86.

3.3.4 *Employee Productivity*

Employee Productivity was measured using the Organizational Citizenship Behavior (OCB) by Lee and Allen (2002). A 5-point Likert-type response format ranging from 1 (never) to 5 (always) with a total of eighteen (18) statements tackling individual workplace performance which was answered by the respondents. The reliability coefficient (Cronbach Alpha) resulted in 0.87, which suggested that it was valid and reliable. This instrument was used by Ramos-Villagrasa et al. for their study in 2019. After the pilot testing, adapted from the actual survey questionnaire were the ten (10) remaining statements focusing on the respondents' indicators toward their extent in accomplishing work efficiently. As for the Cronbach alpha, it resulted to 0.92.

3.3.5 *Career Progression*

The researchers measured the ability and willingness for Career Progression through a researcher-made tool developed by Akkermans et al. in 2012. A 5-point Likert-type scale ranging from 1 (completely disagree) to 5 (completely agree) with a total of twenty-one (21) statements. The reliability coefficient (Cronbach Alpha) resulted in 0.90, which suggested that it was valid and reliable. Permission was sought from Akkermans to modify the original questionnaire. After the pilot testing, the finalized questionnaire for the section of Career Progression had thirteen (13) statements remaining with a Cronbach alpha of 0.92.

3.4 *Data Gathering Procedures and Ethical Considerations*

The researchers had listed and sent a Cover Letter to the managers and other similar positions of selected IT and/or Software companies in the National Capital Region (NCR). Once the manager of the company or its representative had agreed, an Informed Consent form was sent to them through their email. By the time the said managers and employees accepted this request, they were furnished with a Request Letter to ensure that they were aware of the necessary information regarding the study. To obtain more respondents, the researchers reached out to acquaintances who may know participants that fit the criteria. The researchers also approached employees who worked in their respective host training establishments (HTEs) during the rendering of their hours for practicum.

Due to the pandemic, the researchers conducted data gathering using online platforms. Companies who gave their consent were sent a GForms link to complete the five-part online survey questionnaire. Employee respondents were given the discretion of where the online survey questionnaire would be accomplished, whether in their workplace or elsewhere. Participation in this study was entirely voluntary, hence, no financial or non-financial benefits were granted to those who had chosen to participate nor were there risks if the participant had decided to withdraw at any time during the study. All the data collected were stored until after the research was submitted, after which, all the data were deleted. The study also underwent an Ethics Review for ethical considerations.

3.5 *Data Analysis*

The researchers used descriptive statistics, specifically frequency and percentage, to characterize the respondents of the study. Exploratory Factor Analysis (EFA) was also used to surface the underlying dimensions within each construct of the survey instrument. Mainly, Structural Equation Modeling (SEM) was utilized to analyze the collected data to determine the collective effect of gender inequality on job satisfaction, employee productivity, and career progression of female IT and Software professionals in the Philippines. Furthermore, this statistical design was used to determine the causal relationship within and among the said variables. To calculate the data gathered from the study, IBM SPSS and IBM SPSS AMOS (version 24) were used.

4. Results

Exploratory Factor Analysis of the Study Construct

All items from the study's questionnaire were latent variables, namely: gender inequality, job satisfaction, employee productivity, and career progression. These were measured using several item indicators. Using exploratory factor analysis (EFA) with varimax rotation, data reduction was implemented on all latent variables to surface any distinct characteristics. Decision rules on EFA revealed that only gender inequality had distinct factor dimensions. To assess if the sample size of 204 was adequate for factor analysis to proceed, a Kaiser-Meyer-Olkin value of 80% and above was used as an indicator. To show the strength and direction of the individual items to the resulting factor dimension, the factor loading ≥ 0.40 and eigenvalue ≥ 1 were used as part of the decision rules. To represent the contribution of the underlying dimension to the variable being measured, the percent variance of each dimension should be at least 4%. To show that the items are internally consistent, the Cronbach Alpha of the dimensions must be at least 60%. Notably, all items under the underlying dimensions were accepted to represent it.

Table 2. Exploratory Factor Analysis Results Gender Inequality on Female IT and Software Professionals

Gender Inequality Dimensions	**Factor loading**	**Eigenvalue**	**% Variance**	**Cronbach Alpha**
Discrimination based on Gender Stereotypes and Prejudices		5.64	47.68	0.97
Males get more promotional opportunities	0.87			
Males are allocated with more powers and authority	0.86			
Male employees enjoy more credit for their work over female employees	0.84			
There are more leadership opportunities provided to male over female employees	0.84			
Promotion is done based on gender	0.81			
Females are ignored when it comes to reward and recognition	0.78			
Male employees get higher salary than female employees	0.77			

I feel discriminated at the workplace because of my sex	0.71			
I feel threatened by my colleagues of the opposite sex	0.61			
Workload and Perceived Marginalization		2.91	31.40	0.92
I think I work less* than my colleagues of the opposite sex (*less hours, less tasks)	0.88			
My job is easier compared to my colleagues of the opposite sex	0.88			
Females are perceived by their male colleagues as an incompetent employee	0.76			
Male employees enjoy more stress-free jobs than female employees	0.67			
I feel a lot of anxiety, tension & panic attack because of workplace discrimination	0.58			
Total variance explained			79.07	

Kaiser-Meyer-Olkin Measure of Sampling Adequacy = 0.945, Bartlett's Test of Sphericity Approx. Chi-Square = 3266.445, df = 91, $p < 0.01$

Exploratory factor analysis of the 14 items explaining female IT and Software professionals' perception and/or experience of gender inequality yielded two (2) distinct factor dimensions arranged in decreasing percent variance, namely: *Discrimination based on Gender Stereotypes* and *Prejudices and Workload and Perceived Marginalization*. The first dimension, labeled *Discrimination based on Gender Stereotypes and Prejudices*, describes how the generalized belief toward women affected the overall treatment they experienced in the workplace. The second dimension, labeled *Workload and Perceived Marginalization*, describes how women's involvement in the accomplishment of tasks tended to affect how they were perceived in the workplace.

For the first dimension, the most important factors of discrimination based on gender were promotional opportunities (0.87), power and authority distribution (0.86), and credit for work or task accomplishment (0.84); second dimension, the most important factors in one's workload and perceived marginalization were the amount of work (0.88), work difficulty level (0.88), and competence in work participation (0.76).

Table 3. Model Fit Statistics

Measurement	**Value**	**Interpretation**
CMIN/df	2.21	Excellent
P-value	0.00	Excellent
Root mean square of error of approximation (RMSEA)	0.08	Excellent
Incremental Fit Index (IFI)	0.92	Excellent
Tucker-Lewis Index (TLI)	0.91	Excellent

Comparative fit index (CFI)	0.92	Excellent

Table 3 reveals the model fit statistics of the resulting model. CMIN/df value of 2.21 indicates that the sample data and hypothesized model are an acceptable fit in the analysis. Other fit indices measured at p = 0.000, Root Mean Square of Error of Approximation (RMSEA = 0.077), Incremental Fit Index (IFI = 0.916), Tucker-Lewis Index (TLI = 0.907), Comparative fit index (CFI = 0.915) likewise indicated measures within the acceptable level of ≥ 0.90, thus showing support of the proposed model.

The Emerging Model

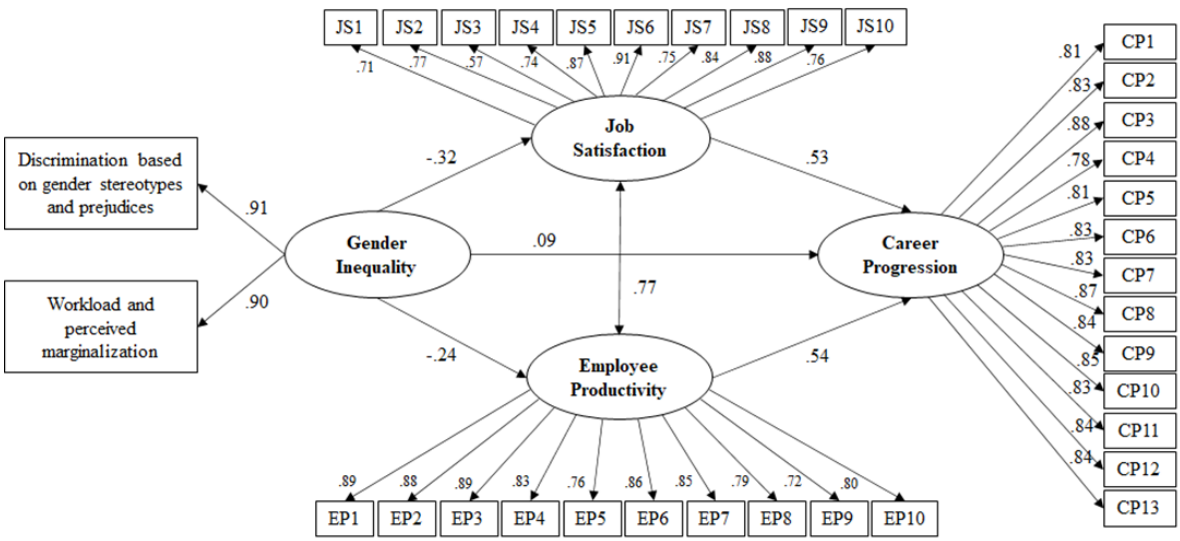

Fig. 2. Resulting Model of the Effect of Gender Inequality on Job Satisfaction, Productivity, and Career Progression of Female IT and Software Professionals

The study depicts a hypothesized model that shows the effect of gender inequality on job satisfaction, productivity, and career progression of female IT and software professionals. Through structural equation analysis of the hypothesized model, it accepted some of the study's hypotheses, such as Gender Inequality which was then eventually clustered into two dimensions namely, "Discrimination based on gender stereotypes and prejudices" and "Workload and Perceived marginalization" negatively affects Job Satisfaction (ß=-0.32) and Employee Productivity (ß=-0.24), while it positively affected Career Progression (ß=0.09). Moreover, both Job Satisfaction and Employee Productivity positively affected the Career Progression of female employees with ß=0.45 and ß=0.53, respectively. Unexpectedly, Gender Inequality in the workplace had a very weak effect on Career Progression (ß=0.09).

Depicted from the figure is the correlation between job satisfaction and employee productivity with a value of 0.77, in which the relationship was clearly strong. The effect of Gender Inequality on Job Satisfaction (ß=-0.32) and Employee Productivity (ß=-0.24), despite being quite heavy, did not suppress the positive impact of the latter two on Career Progression. This signifies that despite the presence of Gender Inequality in the industry, as long as employees were satisfied with their jobs and were feeling productive, there was still an urge to progress in their respective careers. Also, the presence of Gender Inequality served as a minor driving force for female employees to do better in their field, instead of being a hindrance to their growth.

Table 4. Regression Weights of Gender Inequality on Job Satisfaction, Employee Productivity, nd Career Progression as perceived by Female IT and/or Software Progressionals

Item Code	Gender Inequality Indicators	Standardized Regression Weights
GIA1	Discrimination based on gender stereotypes and prejudices	0.91
GIA2	Workload and Perceived Marginalization	0.90
Job Satisfaction Indicators		
JS_1	Overall, I am satisfied with my job	0.71
JS_2	Meeting deadlines is important to me	0.77
JS_3	There are no fundamental things I dislike about my job	0.57
JS_4	I see opportunities for advancement with this job	0.74
JS_5	I feel accomplished when I do my job	0.87
JS_6	My job gives me a chance to use my abilities	0.91
JS_7	My job provides steady income	0.75
JS_8	My job gives me the chance to be “somebody” in the community	0.84
JS_9	My job allows me to enhance my knowledge	0.88
JS_10	I like the support my supervisors, colleagues, and subordinates provide	0.76
Employee Productivity Indicators		
EP_1	I manage to plan my work so that I finish it on time	0.89
EP_2	I am able to set priorities	0.88
EP_3	I am able to carry out my work efficiently	0.89
EP_4	I manage my time well	0.83
EP_5	On my own initiative, I start a new task when my old tasks are completed	0.76
EP_6	I take on challenging tasks when they are available	0.86
EP_7	I come up with creative solutions for new problems	0.85
EP_8	I actively participate in meetings and/or consultations	0.79
EP_9	I take on extra responsibilities	0.72
EP_10	I focus on the positive aspect of the situation at work instead of the negative aspect	0.80
Career Progression Indicators		
CP_1	I can clearly see what my passions are	0.81
CP_2	I am aware of my talents	0.83
CP_3	I know which skills I possess to progress in my career	0.88
CP_4	I know a lot of people within my network who can help me with my career	0.78

CP_5	I am able to approach the right persons to help me with my career	0.81
CP_6	I can clearly show others my strengths	0.83
CP_7	I am able to show others what I want to achieve	0.83
CP_8	I know how to find out what my options are for becoming further educated in my chosen career	0.87
CP_9	I know how to search for developments in my area of work	0.84
CP_10	I can make career plans	0.85
CP_11	I know what I want to have achieved in my career a year from now	0.83
CP_12	I can create a layout for what I want to achieve in my career	0.84
CP_13	I am able to set goals for myself that I want to achieve in my career	0.84

Regression weights indicate what the female IT and software professionals considered as more contributory for each construct (Table 4). The table shows that discrimination based on gender stereotypes and prejudice (β=0.91) was more contributory than workload and perceived marginalization (β=0.90).

It confirms that employees felt more satisfied with their job if it gave them the chance to showcase and use their abilities (β=0.91), provided them the ability to improve their knowledge (β=0.88), and allowed them to feel accomplished when executing it (β=0.87). Meanwhile, compared to these three indicators, the knowledge of the fundamental things that the respondents disliked about their job contributed the least to their job satisfaction (β=0.57).

Likewise, the table also suggests that the employee's ability to carry out work efficiently (β=0.89), plan work to finish it on time (β=0.89), and set priorities (β=0.88) are the most prominent indicator of productivity. Conversely, most of the respondents agreed that taking on extra responsibilities was the least indication of productivity (β=0.72).

It is also depicted above that those employees who were able to determine which skills were needed to progress in their respective careers (β=0.88), can navigate their options for becoming further educated in their chosen career (β=0.87), and had the ability to make career planning decisions (β=0.85) which are all not far behind each other were the prominent indicators of career progression. The least contributory to career progression was having a network of people the respondents know who could help them with their careers (β=0.78).

5. Discussion

The key purpose of this study was to determine and gauge the impact of perceived and actual gender inequality experienced by female IT and Software professionals from various industries within the country. Garnering a total of 204 respondents, the study demonstrated that inequality toward women negatively affected their satisfaction and productivity in their respective jobs. Gender inequality as previously defined, is the "ascriptive characteristic [people] are born with" (Ferrant, 2015)—inequality based on an individual's sex that affects women's success in the workplace as it is hindered by explicit and implicit biases (Babic & Hansez, 2021). Be that as it may, the hypotheses were supported by the results as it was proven that the effect of gender inequality on an employee's productivity and job satisfaction essentially affects their career progression. The emerging linkage between employee productivity and job satisfaction had highlighted the significance of both variables to career progression despite the manifestations of gender inequalities.

On the other hand, its effect on career progression did not satisfy the study's hypothesis. Instead,

gender inequality positively affected career progression, establishing that whether an employee experienced inequality within her workplace or not, their willingness to pursue the opportunity for higher positions or greater career mobility was not heavily influenced. This misaligned hypothesis may be due to how career progression was defined as not limited to formally progressing from the corporate or career ladder and getting equal chances of opportunities but also gaining experience from various professional fields by creating a unique role for oneself to improve one's network, showcase their strengths, and establish goals and career plans in the future (Mwetulundila & Indongo, 2022). With today's society and culture, the perspective toward gender inequality may have been seen as a motivator rather than a barrier that would have intimidated female employees in this profession, affecting the results of the study.

Through exploratory factor analysis, only gender inequality proved to have two underlying dimensions against four previously identified by Tiwari, Mathur, & Awasthi (2018). This may be due to the different culture or dynamics surrounding Filipino women's experience or perception of gender inequality. Moreover, data was collected from a niche group, from a specific industry during a pandemic compared to the instrument's basis that was generalized to working females from Gwalior City. These two dimensions' regression weights were close in value since they were similar and usually came with the other. Discrimination based on gender stereotypes and prejudices was more contributory to gender inequality as it focused on actual experiences of inequality in comparison to workload and perceived marginalization that was subjective and depended on the recipient of the supposed inequality. From a study, it was easier to identify gender inequality from experience through self-reporting rather than from data collected on perceptions based on gender-based career obstacles, thus, strengthening this interconnection (Yasukawa & Nomura, 2014). Proving further that the extent of inequality is critical to people, as affirmed by a qualitative study done by Irwin (2018).

As hypothesized, gender inequality significantly affected job satisfaction and employee productivity negatively. Thus, as female employees in the IT or software profession felt discriminated against and underestimated, they tended to feel more dissatisfied and less productive in their jobs (Singh, Saharan, & Bhat, 2021). In comparison, aside from the indicators of job satisfaction, opportunities for advancement, and pay to name a few, a study showed that women who felt treated equally crucial to their male counterparts had higher job satisfaction ratings (Memon & Jena, 2017). Notably, job satisfaction and employee productivity illustrated a strong relationship with each other. Although not causal in nature, the study suggested that if employees were satisfied with their jobs, they were also productive and vice versa. With the prominence of the hybrid work setup, employees spend more significant time on their work, hence, feelings and satisfaction towards an employee's workplace have a substantial impact on an employee's productivity (Choi & Ha, 2018). Therefore, by practicing equal treatment among the sexes, better profitability and productivity may be expected by organizations as their employees are satisfied (Babic & Hansez, 2021).

The study also confirmed that female employees who were satisfied with their jobs were more likely to pursue career advancement opportunities. This is consistent with a study conducted among physiotherapists in Western Australia wherein lower job satisfaction equated to shorter career intentions (Arkwright et al., 2018). Satisfaction was experienced when female employees did not feel vertical discrimination nor were they dissatisfied and isolated from actual and perceived opportunities, hence, by giving these employees an avenue to freely explore said opportunities, assuming career progression for them is to be promoted, women managers may be produced (Babic & Hansez, 2021). More than job satisfaction, the study also established that productivity positively affected career progression. In opposition to another study's indicator of productivity, results show that the ability to plan and carry out work opens opportunities for career progression that is not limited to the attainment of the topmost position within one's workplace (Stanicuaski et al., 2021).

Major findings of the study suggested that although gender inequality significantly affected career progression, its presence, rather than negatively affecting the pursuance of career advancement, motivated women to progress in their careers in the IT and software profession. With changing times and as observed by many, Filipinos tend to move past hardships by overcoming them and being resilient (Nicomedes et al., 2020). Aligned with a similar study, female lawyers were faced with difficulties to become partner in their firms because of gender-based discrimination, however; their confidence, utilization of resources, and ambition had

created pathways for career progression (Pringle et al., 2017).

Social Exchange Theory succeeded in scrutinizing all the variables' links and impacts on one another. This theory emphasized that when an employee is in a favorable work environment that satisfies them, they are more likely to respond and return the positive attitude received (Ko & Hur, 2014; Babic & Hansez, 2021) by being productive as highlighted by the concept of the reciprocity norm. Moreover, one of the basic premises of SET is the subjective cost-benefit analysis that employers reward good behavior to have it repeated. Hence, rewards like promotions, salary increases, or other relevant benefits must be in exchange for the outputs of productive employees (Chernyak-Hai & Rabenu, 2018).

6. Conclusion

This study attempted to examine the effect of gender inequality on job satisfaction, employee productivity, and career progression of female IT and Software using SEM. This explanatory research conducted in the Philippines aimed to assess and explain how each variable indicated above interacted with each other in accordance with the conceptual framework developed through meticulous consideration of theories and other HRM concepts to form the study's hypotheses. After analyzing the collected data, the study implies that the presence of gender inequality in the workplace of IT and Software professionals significantly affected job satisfaction and employee productivity negatively, while gender inequality, job satisfaction, and employee productivity affected career progression positively. As mentioned above, other connections have been formed as well due to the direct relationship between job satisfaction and employee productivity, and for that reason, an emerging model with two dimensions was developed. Given that the IT and Software industry is male-dominated, the presence of gender inequality is still felt by women who engage in the said profession and they find it hard to feel satisfied and productive in their line of work.

The study also had some limitations. Taking into consideration the small population, and the difficulty in locating qualified participants, the researchers were only able to gather 204 female respondents fitting the criteria to participate in the study within the three-month period of data gathering. Additionally, given that the study was conducted under the effects of the COVID-19 pandemic, the researchers had limited access to the respondents since they were discouraged from visiting offices onsite. Finally, the researchers could not guard against every possible factor and bias that the respondents may or may not have.

7. Recommendations

Conducting the study aided the researchers to gain a better view of the current situation of IT and Software professionals, and how factors contributed to the overall performance of these professionals. Moving forward, studies can be conducted in order to increase job satisfaction and employee productivity so that they are more likely to take on new tasks and accept more responsibilities which will then lead to career advancement.

The study could serve as a stepping stone as it shed light on how female IT and software professionals do not know a lot of people within their network whom they can approach to help guide them in their careers. Thus, they seemingly lack mentors–as only 2.94% of them seem to be a part of the senior management. This study can help emphasize the need for the HR department and universities to have career orientations given by female IT speakers in order to tackle the male domination that is happening in the said profession. Furthermore, this study could provide insights for HR professionals to re-establish the industry of IT and software to make it suitable for people regardless of their gender. It could also pave the way for the industry to improve its current practices and views to have a more inclusive and fair environment in which employees are all satisfied, empowered, and inspired to progress with their respective careers.

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Appendix A.
Figures and Tables

Figure 1. Conceptualized model depicting the effect of gender inequality on job satisfaction, productivity, and career progression of female IT and Software Development professionals

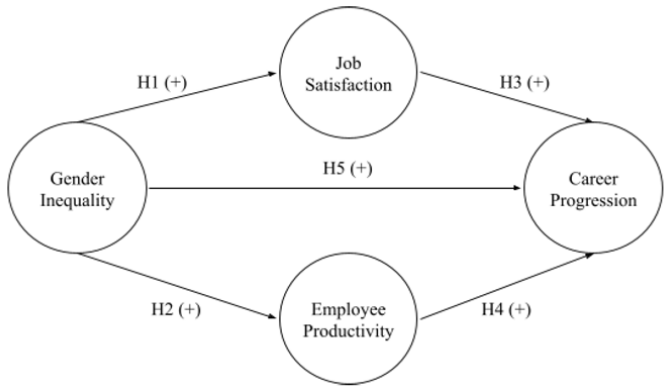

Figure 2. Resulting Model of the Effect of Gender Inequality on Job Satisfaction, Productivity, and Career Progression of Female IT and Software Professionals

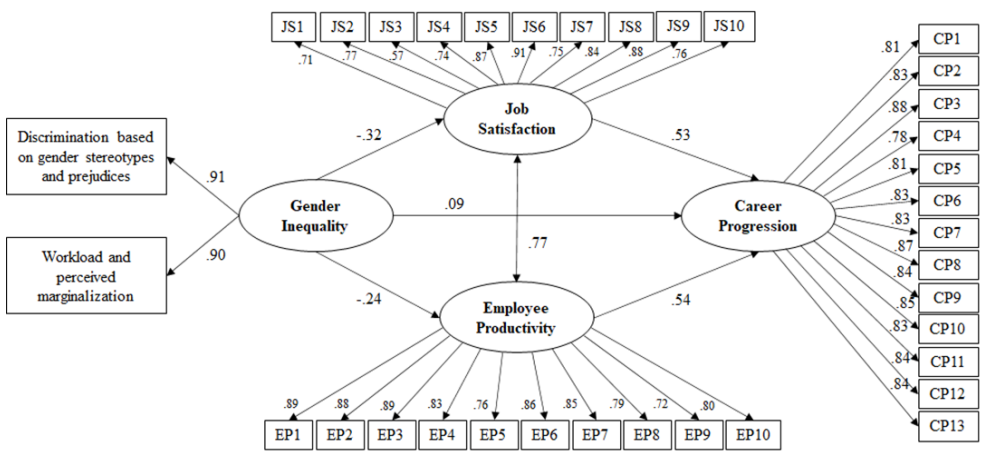

Table 1. Demographic Characteristics of Female IT and Software Professionals (n = 204)

Profile	n	%	Profile	n	%
Age			**Educational Background**		
<30	135	66.2	Incomplete Higher Education	5	2.5
30-35	42	20.5	Bachelor's Degree	189	92.6
36-40	14	6.9	Master's Degree	7	3.4
41-45	7	3.4	Doctoral/Doctorate Degree	3	1.5

>45	6	2.9	Number of Children		
Marital Status			0	161	78.9
Single	168	82.4	1	22	10.8
Married	25	17.2	2	14	6.9
Widowed	1	0.5	3	7	3.4
			Professional Experience in the Profession		
Length of Service			<12 mos	23	11.3
<12 mos	42	20.6	1-2 yrs	39	19.1
1-2 yrs	60	29.4	3-4 yrs	45	22.1
3-4 yrs	58	28.4	5-6 yrs	35	17.2
5-6 yrs	20	9.8	>7 yrs	62	30.4
>7 yrs	24	11.8	**Position in the Company**		
Work Setup			Senior Management	6	2.94
Remote	59	28.9	Middle Management	31	15.2
On-site	52	25.5	Senior Staff	99	48.53
Hybrid	93	45.6	Rank and File	68	33.33

Table 2. Exploratory Factor Analysis Results Gender Inequality on Female IT and Software Professionals

Gender Inequality Dimensions	**Factor loading**	**Eigenvalue**	**% Variance**	**Cronbach Alpha**
Discrimination based on Gender Stereotypes and Prejudices		5.64	47.68	0.97
Males get more promotional opportunities	0.87			
Males are allocated with more powers and authority	0.86			
Male employees enjoy more credit for their work over female employees	0.84			
There are more leadership opportunities provided to male over female employees	0.84			
Promotion is done based on gender	0.81			
Females are ignored when it comes to reward and recognition	0.78			
Male employees get higher salary than female employees	0.77			

I feel discriminated at the workplace because of my sex	0.71			
I feel threatened by my colleagues of the opposite sex	0.61			
Workload and Perceived Marginalization		2.91	31.40	0.92
I think I work less* than my colleagues of the opposite sex (*less hours, less tasks)	0.88			
My job is easier compared to my colleagues of the opposite sex	0.88			
Females are perceived by their male colleagues as an incompetent employee	0.76			
Male employees enjoy more stress-free jobs than female employees	0.67			
I feel a lot of anxiety, tension & panic attack because of workplace discrimination	0.58			
Total variance explained			79.07	

Table 3. Model Fit Statistics

Measurement	**Value**	**Interpretation**
CMIN/df	2.21	Excellent
P-value	0.00	Excellent
Root mean square of error of approximation (RMSEA)	0.08	Excellent
Incremental Fit Index (IFI)	0.92	Excellent
Tucker-Lewis Index (TLI)	0.91	Excellent
Comparative fit index (CFI)	0.92	Excellent

Table 4. Regression Weights of Gender Inequality on Job Satisfaction, Employee Productivity, nd Career Progression as perceived by Female IT and/or Software Progressionals

Item Code	Gender Inequality Indicators	Standardized Regression Weights
GIA1	Discrimination based on gender stereotypes and prejudices	0.91
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JS_3	There are no fundamental things I dislike about my job	0.57
JS_4	I see opportunities for advancement with this job	0.74

JS_5	I feel accomplished when I do my job	0.87
JS_6	My job gives me a chance to use my abilities	0.91
JS_7	My job provides steady income	0.75
JS_8	My job gives me the chance to be “somebody” in the community	0.84
JS_9	My job allows me to enhance my knowledge	0.88
JS_10	I like the support my supervisors, colleagues, and subordinates provide	0.76
Employee Productivity Indicators		
EP_1	I manage to plan my work so that I finish it on time	0.89
EP_2	I am able to set priorities	0.88
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EP_4	I manage my time well	0.83
EP_5	On my own initiative, I start a new task when my old tasks are completed	0.76
EP_6	I take on challenging tasks when they are available	0.86
EP_7	I come up with creative solutions for new problems	0.85
EP_8	I actively participate in meetings and/or consultations	0.79
EP_9	I take on extra responsibilities	0.72
EP_10	I focus on the positive aspect of the situation at work instead of the negative aspect	0.80
Career Progression Indicators		
CP_1	I can clearly see what my passions are	0.81
CP_2	I am aware of my talents	0.83
CP_3	I know which skills I possess to progress in my career	0.88
CP_4	I know a lot of people within my network who can help me with my career	0.78
CP_5	I am able to approach the right persons to help me with my career	0.81
CP_6	I can clearly show others my strengths	0.83
CP_7	I am able to show others what I want to achieve	0.83
CP_8	I know how to find out what my options are for becoming further educated in my chosen career	0.87
CP_9	I know how to search for developments in my area of work	0.84
CP_10	I can make career plans	0.85
CP_11	I know what I want to have achieved in my career a year from now	0.83
CP_12	I can create a layout for what I want to achieve in my career	0.84
CP_13	I am able to set goals for myself that I want to achieve in my career	0.84

Appendix B.
Adapted Questionnaires

Section 1. Demographics

1. Age
( ) Less than 30 years old ( ) 36-40 years old ( ) Greater than 45 years old
( ) 30-35 years old ( ) 41-45 years old

2. Educational Background
( ) Incomplete Higher Education ( ) Master's Degree
( ) Bachelor's Degree ( ) Doctorate

3. Marital status
( ) Single ( ) Married
( ) Divorced ( ) Widow

4. Number of Children: _____

5. Position in the Company
( ) Technical Support ( ) Software Project Manager
( ) Developer ( ) Research and Development
( ) Chief Technology Officer ( ) Others: _____

6. Length of Service in the Company
( ) Up to 12 months ( ) 3 to 4 years ( ) More than 7 years
( ) 1 to 2 years ( ) 5 to 6 years

7. Professional Experience in the Profession
( ) Up to 12 months ( ) 3 to 4 years ( ) More than 7 years
( ) 1 to 2 years ( ) 5 to 6 years

8. Work Setup
( ) On-site ( ) Remote ( ) Hybrid

Section 2. Gender Inequality

	1	2	3	4	5	6
1. Promotion is done based on gender						
2. I feel threatened by my colleagues of the opposite sex						
3. I feel a lot of anxiety, tension & panic attack because of workplace discrimination						
4. There are more leadership opportunities provided to male over female employees						
5. Male employees enjoy more credit for their work over female employees						
6. I feel discriminated at the workplace because of my sex						
7. Females are ignored when it comes to reward and recognition						
8. Males are allocated with more powers & authority						
9. Males get more promotional opportunities						
10. Male employees get higher salary than females employees						

11. Male employees enjoy more stress-free jobs than female employees						
12. Females are perceived by their male colleagues as an incompetent employee						
13. I think I work less* than my colleagues of the opposite sex (*less hours, less tasks)						
14. My job is easier compared to my colleagues of the opposite sex						
Adapted from Tiwari, M. et al. (2018); Cronbach Alpha: 0.902; Locus: 140 Working Females from Gwalior City *Cronbach Alpha (Pilot testing): 0.92*						

Section 3. Job Satisfaction

	1	2	3	4	5	6
1. Overall, I am satisfied with my job						
2. Meeting deadlines is important to me						
3. There are no fundamental things I dislike about my job						
4. I see opportunities for advancement with this job						
5. I feel accomplished when I do my job						
6. My job gives me a chance to use my abilities						
7. My job provides steady income						
8. My job gives me the chance to be “somebody” in the community						
9. My job allows me to enhance my knowledge						
10. I like the support my supervisors, colleagues, and subordinates provide						
Adapted from Martins, H. & Proenca, T. (2014), Phuong, T. & Vinh, T. (2020); Cronbach Alpha: 0.91 (Global Scale), 0.88 (Extrinsic Satisfaction), 0.86 (Intrinsic Satisfaction) and 0.952; Locus: Portuguese Hospital Employees, Vietnamese Hospital Employees *Cronbach Alpha (Pilot testing): 0.86*						

Section 4. Employee Productivtity

	1	2	3	4	5	6
1. I manage to plan my work so that I finish it on time						
2. I am able to set priorities						
3. I am able to carry out my work efficiently						
4. I manage my time well						

5. On my own initiative, I start a new task when my old tasks are completed						
6. I take on challenging tasks when they are available						
7. I come up with creative solutions for new problems						
8. I actively participate in meetings and/or consultations						
9. I take on extra responsibilities						
10. I focus on the positive aspect of the situation at work instead of the negative aspect						
Adapted from Ramos-Villagrasa P.J. et al. (2019); Cronbach Alpha: 0.87; Locus: Select degree students of the Faculty of Work and Social Sciences from the University of Zaragoza (Spain) *Cronbach Alpha (Pilot testing): 0.92*						

Section 5. Career Progression

	1	2	3	4	5	6
1. I can clearly see what my passions are						
2. I am aware of my talents						
3. I know which skills I possess to progress in my career						
4. I know a lot of people within my network who can help me with my career						
5. I am able to approach the right persons to help me with my career						
6. I can clearly show others my strengths						
7. I am able to show others what I want to achieve						
8. I know how to find out what my options are for becoming further educated in my chosen career						
9. I know how to search for developments in my area of work						
10. I can make career plans						
11. I know what I want to have achieved in my career a year from now						
12. I can create a layout for what I want to achieve in my career						
13. I am able to set goals for myself that I want to achieve in my career						
Adapted from Akkermans, J. et al (2012); Cronbach Alpha: 0.90; Locus: Students from five Dutch intermediate vocational schools *Cronbach Alpha (Pilot testing): 0.92*						