Perception of the glass ceiling and job satisfaction of women in the agricultural industry of Latin America

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Abstract

The representation of women in the agricultural sector of Latin America remains disproportionate in comparison to their male counterparts. However, women represent an untapped potential for economic growth in the region. The purpose of this study was to evaluate job satisfaction and to measure beliefs about the glass ceiling among women in the Latin American agricultural industry. Given the regional scope of this study, a descriptive-exploratory methodology was used through the administration of an online survey instrument (Gall et al., 2007). Participants were alumni from the Zamorano Pan-American Agricultural School who are working in the Latin American agricultural industry. They were asked to complete an online survey instrument via Qualtrics. The instrument included three sections: (1) the Job Satisfaction Scale (JSS) developed by Spector (1985), (2) the Career Pathway Survey (CPS) developed by Smith et al. (2012), and (3) a demographics section. Descriptive statistics and a K-means partitional clustering algorithm were used to assess the research objectives. The findings of this study indicate that it is plausible that women in the Latin American agricultural industry pursue leadership positions at some point in their professional lives. However, when they fail to attain them, they decide to accept the existing barriers and cease attempting to overcome them. The study found no significant correlation between job satisfaction and beliefs about the glass ceiling. Moreover, the prevailing beliefs of women alumni of Zamorano working in the Latin American agricultural industry were acceptance and resignation. This suggests that the potential of women in the industry may not be fully reached in the near future unless significant changes occur within the workplace of the agricultural industry in the region.

Keywords: women leadership, glass ceiling, Latin America, barriers, job satisfaction

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Introduction

After many years as spectators of countries' economic activity, women have become an extremely valuable resource in the workplace worldwide. The implementation of gender equality policies and programs in Latin America over the past four decades has facilitated increased access to education, health care, and labor for girls and women across the region (Albornoz-Pollmann, 2017; Chioda & Verdú, 2016). Furthermore, the implementation of strategies such as participation quotas has increased women's involvement in the labor force. As a result, the proportion of women in the workforce has increased at a faster rate than in any other region of the world since the 1980s, rising by almost 20% (Chioda & Verdú, 2016). Yet, women's contributions to the region could potentially be higher. According to Novta and Wong (2017), women in Latin America represent an untapped engine force for economic growth. A study conducted by Woetzel et al. (2015) suggests that if women were to fully participate in paid labor force in Latin American economies, as opposed to only 53%, the gross domestic product (GDP) for the region would increase by approximately 26%.

The efforts throughout the region to promote women's equality have led to considerable progress in their advancement to leadership positions. This is particularly true in politics where women hold, on average, 25% of the parliament seats in the region (Chioda & Verdú, 2016). In 2005, Maxfield conducted a study to understand the barriers that women encounter in their pursuit of leadership roles among women who held leadership positions in the region (n =120). The majority indicated that they felt the need to prove themselves to their male counterparts, supervisors, and subordinates because they believed they were held to higher standards. In fact, all participants in the study indicated having to work twice as much as their male counterparts to be taken seriously and obtain at least the same level of recognition as them. A similar conclusion was reached in another study that examined women´s barriers in traditionally male-dominant fields such as engineering and science and technology research in Chile (Yañes & Godoy, 2008). One of the most salient points in Maxfield's research was that women continually feel challenged to balance family and work. Even though women in the study indicated having access to programs that facilitate family responsibilities, such as a flexible schedule, most of them admitted to not using them (Maxfield, 2005).

When exploring women's presence on boards across the region, the representation has increased from 15.3% to 20.6% between 2015 and 2019 (Kersley et al., 2019). Currently, it is normal for a woman to work in fields, which, in the past, were considered exclusive for males, such as agriculture. The increase in women's involvement in the agricultural sector has been notorious. By 2014, women represented about 43% of the agricultural workforce in developing countries (Food and Agriculture Organization of the United Nations [FAO], 2014).

Despite these advances, women are still underrepresented in the upper ranks of companies and industries, especially in the agricultural industry of Latin America. The number of women in leadership positions continues to be much lower than that of men (Flabbi et al., 2016). Multiple researchers have tried to explain the reasons for this leadership gap between genders, naming them as barriers or obstacles that prevent

women's advancement. For example, Elmuti et al. (2009) mention the glass ceiling as one of the barriers by which women may be affected in their career advancement.

The American Association of University Women (AAUW) defines the glass ceiling as a symbolic wall representing the various obstacles hindering women's advancement to senior positions within an organization (AAUW, 2016). Similarly, Elmuti et al. (2009) discussed that organizational barriers, as well as social barriers, are to blame for the limited participation of women in leadership positions. He explains that organizational aspects such as the selection process and the absence of a mentor may be part of these barriers. In addition, social aspects such as discrimination, prejudice, and stereotypes can affect women's advancement (Northouse, 2021).

Despite the advancements women have made in achieving certain professional positions in different industries, the persistence of multiple barriers and their associated beliefs continue to hinder women's professional advancement. These barriers significantly influence women's job satisfaction and, thus, their performance (Fallahi et al., 2015). For example, when discussing barriers and beliefs, Latin American women are expected to contribute to household income equally as men. However, the decision to engage in the workforce is still highly linked to whether they are married or single and whether they have or do not have children (Novta & Wong, 2017). In fact, a study conducted in Mexico, Brazil, and Argentina in 2010 found that women in the region tend to move toward informal occupational settings due to the flexibility it provides, allowing them to care for their families (Bosch & Malloney, 2010). The transition toward more informal and flexible work arrangements has been accelerated by the impact of the COVID-19 pandemic, placing heightened pressure on women to meet traditional expectations regarding childcare and domestic responsibilities. Consequently, women as a group are experiencing a regression in their professional advancement in the wake of the pandemic. (Budge & Shortall, 2022).

Job satisfaction can be understood as how the employees of an organization feel, positively or negatively, in relation to their workplace. The degree of satisfaction among employees can impact various aspects of their work performance, including efficiency, productivity, absenteeism, intentions to resign, and their general well-being (Gangai & Agrawal, 2015). Therefore, job satisfaction becomes a key variable of analysis at the organization and industry level. The factors that contribute to an individual's level of job satisfaction include the benefits offered, work environment, pay, supervision, coworkers, and promotion possibilities (Gangai & Agrawal, 2015). Naveed et al. (2011). Garba and Abdullahi (2019) found that promotion possibilities have a significant positive relationship with the degree of job satisfaction of employees. Consequently, the higher the probability of promotion or advancement, the higher his or her job satisfaction. This aspect should be considered by organizations if they wish to achieve elevated levels of satisfaction and, therefore, high productivity.

Despite the notable increase in women's participation in the workforce in Latin America, most studies conducted in the region have not addressed the challenges and barriers women face. These have approached women's leadership from a perspective of equality, leadership styles, and effectiveness (Bosch & Malloney, 2010; Cárdenas de Santamaría, 2007; Maxfield, 2005; Yáñez & Godoy, 2008;). Albornoz-Pollmann (2017) emphasized the need to conduct research in Latin America to provide a more profound understanding of the linkages between women's leadership, the perceived barriers to leadership, and the potential benefits to the economy. Considering the agricultural industry's importance in Latin America regarding food, fiber, fuel, and environmental

impact worldwide, it is necessary to explore the prevailing beliefs about the glass ceiling in the industry and women's job satisfaction in order to optimize the industry´s contributions to the world.

Theoretical Framework

This research study is guided by the Role Congruity Theory developed by Eagly and Karau (2002). This theory explores the perceived characteristics of individuals and their role within the organization, this contrast yields a perceived competence. In other words, it contrasts societal expectations of gender roles and the perception of who is suitable to hold leadership positions (Sabharwal, 2013). According to Eagly and Karau, prejudice is the consequence of the incongruity in individuals' roles. This incongruity explains why individuals, especially women, may self-select or opt out of work-related opportunities in particular fields or positions within an organization, perpetuating stereotypes that women lack the competence to hold leadership roles and consequently contributing to the existence of the glass ceiling (Akhmedova et al., 2015). Congruity or incongruity can affect an individual's quality of life in factors such as stress, job satisfaction, and organizational commitment. Notably, poor job satisfaction because of incongruity is negatively associated with satisfaction in terms of payment, supervision, and promotion within an organization and positively associated with anxiety, depression, stress, and turnover intentions (Brown et al., 2014).

In Latin America, traditional gender role attitudes are a defining feature. Despite the advancement of women in the region, their progress toward leadership positions is incongruent with societal expectations of gender roles (Hermans et al., 2017). In a political science study in the Latin American context, role congruity theory was used to evaluate the hypothesis that because politics are male dominant in the region, there is a congruity between male politician traits and political leadership traits (Osorio Michel, 2023).

Overall, women in agriculture are perceived to be subservient to managerial authority, less prone to activism, more committed to their work, and more dexterous and careful, which makes them more suitable for activities associated with female roles, such as food preparation tasks like skinning and deboning in meat harvesting facilities (Dolan & Sorby, 2003). In Latin America, women are disproportionally represented in managerial roles within the agricultural industry, often opting for farmwork activities or entry-level positions; therefore, in the region, women's roles tend to be temporary, part-time, or low-skilled (FAO, 2023). Given the male dominance of the agricultural industry in Latin America and the limited existing literature on women's roles outside of farmwork activities, it is plausible that women working in this sector may experience incongruity, potentially leading to job dissatisfaction. Such circumstances may result in women choosing to leave the agricultural industry in Latin America or to, alternatively, opt out of career advancement opportunities. This may ultimately impact the region's economic growth potential. It is, therefore, crucial to comprehend the work-life experience of women to identify potential avenues for enhancing organizational culture and implementing strategies for change (Sabharwal, 2013).

Purpose and Objectives

This study aimed to explore the perception of the glass ceiling and job satisfaction among women working in the agricultural industry of Latin America who had graduated from an international Latin American university. This study had four objectives: 1) to determine the job satisfaction of women; 2) to categorize their beliefs

about the glass ceiling; 3) to profile these women based on job satisfaction, beliefs about the glass ceiling, and demographics, and 4) to determine the relationship between job satisfaction and beliefs about the glass ceiling.

Methods

The study sought to evaluate job satisfaction and measure beliefs about the glass ceiling among women who had graduated from Zamorano Pan-American Agricultural School, known as Zamorano. Because the study pursued a regional scope, a descriptive-exploratory methodology was used through the collection of an online survey instrument (Gall et al., 2007).

Participants were asked to complete an online survey instrument via Qualtrics. The instrument included three sections: (1) the job satisfaction (JSS) developed by Spector (1985), (2) the career pathway survey (CPS) developed by Smith et al. (2012), and (3) a demographics section. The Job Satisfaction Survey (JSS) is a 36-item instrument that evaluates employees' attitudes about nine constructs related to how individuals perceived their job satisfaction: pay (remuneration), promotion (opportunities to grow), supervision (immediate supervisor), fringe benefits (monetary and nonmonetary fringe benefits), contingent rewards (reward-based performance), operating procedures (rules and procedures), coworkers (people individuals work with), nature of work (job tasks), and communication (communication within the organization). The instrument uses a six-point Likert scale, ranging from strongly disagree to strongly agree.

The second section included the Career Pathways Survey (CPS), which aims to quantitatively assess or measure people's attitudes about the glass ceiling (Smith et al., 2012). The CPS provides feedback on these attitudes by scoring four constructs: resignation, acceptance, resilience, and denial. The resignation construct refers to why individuals, in our case, women, give up or do not pursue career advancement due to organizational and social obstacles. The acceptance construct refers to women's satisfaction and happiness when they do not pursue a promotion. The resilience construct is based on statements showing how women believe they can overcome existing barriers. Finally, the denial construct refers to women's disbelief in the existence of the glass ceiling (Smith et al., 2012). The CPS questionnaire consists of 38 items on a seven-point Likert scale, going from strongly agree to strongly disagree (Smith et al., 2012).

Finally, the instrument included a demographic information section to collect data such as year of birth, academic degree, marital status, main activity, the existence of children in the household, and position held at work. These variables were selected since they are determinants of female leadership and women's professional growth (Northouse, 2021). A filter question was included to ensure suitability for completing the survey instrument (industry).

The research was conducted with the participation of women alumni from the Zamorano. This prestigious agricultural higher education institution in Honduras is renowned for its learning-by-doing and practical approach to learning. The university attracts students from 18 to 20 countries in the Latin American region annually and has admitted women since 1981 for a comprehensive span of work experience of up to 30 years. Therefore, the authors considered alumni of Zamorano to be individuals who are equipped to provide insights into the established objectives.

The alumni database of Zamorano was filtered to include only women, resulting in a total of 1,452 female alumni invited to participate. Data collection procedures were followed using Dillman et al. (2014) guidelines. An invite and four reminders were sent to the participants to motivate their participation. These reminders were sent weekly, and two in the last week. The allotted time for data collection was four weeks. A total of 251 women completed the instrument (N=251), leading to a response rate of 17.29%. The researchers conducted an early and late survey response analysis to minimize the threat of external validity by nonresponse error (Lindner et al., 2001).

Following the suggestions given by Lindner et al. (2001), the population was separated into two different samples: those who responded before the last two reminders and those who responded after to ensure that the number of late responders was at least 30 individuals. Thus, a sample of 196 women was obtained in the early response group (n=196) and 55 in the late response group (n=55). Two independent t-tests were conducted to assess the following null hypotheses. There is no significant difference in the job satisfaction scale between early and late responders, and there is no significant difference in the career pathway survey constructs between early and late responders. At a significance level of five percent ($\alpha = 0.05$), the null hypothesis that job satisfaction and career pathways were equal between early and late responders could not be rejected. Therefore, there is no significant difference between the responses of early and late female respondents regarding the job satisfaction scale and the career pathway survey. According to Lindner et al. (2001), the study's external validity is proven by finding no significant differences between the means of the responses of any of the groups evaluated. Thus, the results can be generalized to the target population, in this case, alumni women of Zamorano working in the Latin American agricultural sector.

Data analysis for this research included multiple statistical procedures. For objective one, determining job satisfaction, the database for analysis was prepared following the guidelines provided by the instrument author (Spector, 2019). Negatively worded items were recoded, and the construction and interpretation of each construct were made considering the author's recommendation, which indicates that mean scores above 4.0 fall into the construct of satisfied, mean scores between 3.0 and 4.0 into ambivalent, and mean scores below 3.0 should be categorized as dissatisfied. In addition, following the recommendation of Bateh and Heyliger (2014), a midpoint was established in the "ambivalent" category, where women with a mean score below 3.5 were categorized as dissatisfied, and above as satisfied.

For objective two, categorizing women's beliefs about the glass ceiling, descriptive statistics were used to describe the findings regarding the perception of the glass ceiling using the CPS instrument by Smith et al. (2012). The mean score of each construct was calculated (resignation, acceptance, resilience, and denial) based on Smith et al (2012) guidelines. The highest mean score signals the predominant beliefs about the glass ceiling (Smith et al., 2012).

For objective three, profiling of the participants, an unsupervised machine learning algorithm was used, specifically k-means, which partitions the data set into k distinct, non-overlapping clusters (profiles). The k-means algorithm reduces the variance within clusters, or groups, where individuals within each cluster are similar, while the clusters are as distinct as possible (Johnson & Wichern, 2015). K-means is one of multivariate data's most popular clustering methods (Jain, 2009). In this study, the k-means procedure aimed to understand an underlying structure to "gain insight into data, generate hypotheses, detect anomalies, and identify salient features" (Jain, 2009, p.

3). Clustering was performed using the scores of the JSS constructs and another using the scores of the CPS constructs. Afterward, each cluster was described according to their average JSS and CPS scores and demographic characteristics. The predominant demographic characteristic (highest frequency) is presented for each cluster. To prevent profiles from having low membership (less than five percent), the authors defined the number of clusters (k) to be three in both exercises ($k = 3$). Additionally, chi-square tests of independence were used to test the group membership dependence on demographic characteristics. The null hypothesis of the independence test is that group membership does not depend on demographic characteristics when both variables are coded as categorical variables. The tests of independence allow to identify key demographic differences between clusters.

Finally, to assess objective fourth, determine the relationship between job satisfaction and beliefs about the glass ceiling, a correlation analysis was conducted using Pearson's correlation coefficient to determine the extent to which beliefs about the glass ceiling are linearly related to job satisfaction among women in the Latin American agricultural industry.

To verify the instrument's internal consistency, a reliability test was performed using Cronbach's alpha coefficient for both questionnaires, CPS and JSS. Reliability analysis indicates whether a questionnaire consistently reflects the construct that is being measured (Field, 2013). Two validations were carried out: one before launching the questionnaire using pilot testing prior to launching the instrument ($n = 14$) and another post-hoc using the responses of the sample under study. The pre-test results indicated a Cronbach's alpha of 0.78 for the CPS instrument and 0.698 for the JSS instrument. The final reliability analysis indicated instrument coefficients of 0.743 and 0.914 for the CPS and JSS, respectively. Constructs Cronbach's coefficients varied from 0.792 to .904 for the JSS instrument and from 0.669 to 0.720 for the CPS instrument. According to Nunnally and Bernstein (1994), the minimum acceptable alpha to support the internal consistency of an instrument is 0.70. Therefore, both validations prove the internal consistency of the instruments and, thus, their reliability. Similarly, these reliability analyses are consistent with those found in the validation process conducted by the authors of both instruments (Smith et al., 2012; Spector, 1985).

Findings

This research pursued four objectives: the first was to determine women's job satisfaction in the Latin American agricultural industry; the second was to categorize their beliefs about the glass ceiling. The third objective was to demographically profile these women based on job satisfaction criteria and beliefs about the glass ceiling. Finally, the last objective was to determine the relationship between job satisfaction and beliefs about the glass ceiling of women in the Latin American agricultural industry. The alumni represented in the survey came from 15 countries of the region: Honduras (31%), Ecuador (28%), El Salvador (10%), Guatemala (7%), Bolivia (6%), Panama (5%), Nicaragua (5%), Dominican Republic (2%), Peru (2%), and a remaining smaller representation (4%) from Colombia, Costa Rica, Mexico, Haiti, Belize, Paraguay, and Chile.

Table 1 shows the levels of overall job satisfaction and by construct of the JSS presented by women in the Latin American agricultural industry. Following the suggestions of Spector (1994), and Bateh and Heyliger (2014) for the categorization of

the results, values equal to or lower than 3.5 were taken as indicators of dissatisfaction and, therefore, values higher than this indicates satisfaction. Considering this categorization, women who participated were dissatisfied regarding payment (*M* = 3.50; *SD* = 1.45) and operating procedures (*M* = 3.29; *SD* = 1.2). On the other hand, women exhibited the highest level of satisfaction in the construct related to the nature of work (*M* = 4.46; *SD* = 1.28). The overall job satisfaction score indicates that women in this study feel satisfied (*M* = 3.81; *SD* = 1.34).

Table 1
Descriptive statistics of women's job satisfaction level (n = 251)

Construct	*M*	*SD*
Nature of Work	4.46	1.28
Supervision	4.24	1.39
Coworkers	3.92	1.24
Contingent Rewards	3.88	1.36
General satisfaction	3.81	1.34
Communication	3.79	1.40
Promotion	3.64	1.24
Fringe Benefits	3.61	1.39
Pay	3.50	1.45
Operating Procedures	3.29	1.32

Note. Values ≤ 3.5 = dissatisfaction, > 3.5 = satisfaction.

Table 2 presents the overall findings regarding women's glass ceiling beliefs. According to the results, acceptance and resignation beliefs about the glass ceiling are predominant in women in the Latin American agricultural industry, with mean scores of 3.87 (*SD* = 1.66) and 3.57 (*SD* = 1.60), respectively. On the other hand, the resilience construct obtained the lowest mean score (*M* = 2.18; *SD* = 1.28).

Table 2
Descriptive statistics of women's beliefs about glass ceiling (n = 251)

CPS construct	M	SD
Denial	2.98	1.60
Resignation	3.57	1.60
Resilience	2.18	1.28
Acceptance	3.87	1.66

Table 3 shows the average satisfaction values for each construct based on the three classification groups that resulted after applying the K-means clustering method. The results denote the constructs of highest satisfaction and dissatisfaction within each group. Women in group 1 show higher satisfaction with the nature of work and the highest dissatisfaction with pay. For groups 2 and 3, it can be noted that the construct of greatest satisfaction is supervision, while the constructs of greatest dissatisfaction are operating conditions and communication, respectively. Similarly, the overall results indicate that women in Group 1 are most likely dissatisfied with their jobs. At the same time, those in groups 2 and 3 are satisfied, with the latter having the highest level of job satisfaction.

Table 3
K-means grouping based on women's job satisfaction (n = 251)*

Characteristic	Group 1 (*n* = 66)	Group 2 (*n* = 107)	Group 3 (*n* = 78)
	M	*M*	*M*
Overall satisfaction	3.043	3.721	4.589
Nature of work	4.598	4.133	4.792
Communication	3.288	3.664	4.385
Supervision	3.239	4.147	5.208
Co-workers	3.189	3.778	4.724
Promotion	2.826	3.484	4.529
Contingent reward	2.758	3.759	4.987
Operating conditions	2.640	3.404	3.679
Fringe Benefits	2.583	3.551	4.545
Pay	2.269	3.568	4.449

Note. * mean score values ≤ 3.5 = job dissatisfaction, values > 3.5 = job satisfaction.

Furthermore, all demographic characteristics were analyzed to identify the characteristics of women in each identified group based on their job satisfaction categorization, that is, to highlight common attributes among women with a high level of job satisfaction and those who were dissatisfied. Based on the K-means grouping, women in group one can be described as women in the Latin American agricultural sector with an overall job dissatisfaction (M = 3.04). They are primarily women with an undergraduate degree (53.03%), single (69.70%), without children (66.67%), and employed in the agricultural sector in middle management positions (45.46%). The women in group two, for the most part, have bachelor's degrees (50.47%), are single (64.49%), have no children (69.19%), are employed in organizations in the sector in middle management (28.92%), yet an important percentage have no position identified (23.36%). Women in the third group can be described as having the highest job satisfaction level. In contrast to the other two groups, they are women with mostly master's degrees (44.87%), single (53.84%), although a large percentage of them are married (46.16%), with no children at home (51.28%), employed in the sector (69.23%), and that most of them are in senior management positions (34.62%).

Using a significance level of .10 in the chi-square tests of independence ($p \leq .10$), dependence between the variables of having children ($p = .035$), main activity ($p = .093$), and position ($p = .001$) with the groups were found. That is, the group in which each woman is grouped according to her job satisfaction depends on these variables. On the other hand, although the variables of academic degree and marital status were discussed as part of the characteristics, these did not show dependence on the groups resulting in p-values of .117 and .127, respectively.

Table 4 presents the mean values of the CPS constructs for each group following the application of the K-means clustering method. The results indicate that both women in group one and group three believe in acceptance of the glass ceiling, while women in group two adhere to a resignation belief.

Table 4
K-means grouping based on women's beliefs regarding the glass ceiling (N = 251)

CPS construct	Group 1 (n = 94)	Group 2 (n = 81)	Group 3 (n = 76)
	M	*M*	*M*
Denial	2.591	3.069	3.376
Resignation	2.998	3.930	3.893
Resilience	1.838	2.117	2.662
Acceptance	3.430	3.715	4.596

All demographic characteristics were analyzed to identify the characteristics of women at each identified group based on their beliefs regarding the glass ceiling categorization. Based on the K-means grouping, Women in group one present an acceptance belief of the glass ceiling ($M = 3.43$). They are women who mostly have a bachelor's degree (57.44%), are single (67.02%), have no children at home (70.21%), are employed in the sector, and many of them are business owners (20.21%), and, lastly, hold middle management positions (35.10%). The women in group two exhibit a higher belief of resignation of the glass ceiling ($M = 3.93$). The majority of these women hold a master's degree (54.32%), are married (60.49%), have children (62.96%), are salaried employees in the sector, and hold senior and middle management positions (25.92% and 24.69%, respectively). Finally, women in group three hold a stronger belief of acceptance of the glass ceiling than those in group 1 ($M = 4.59$). As in group one, most of these women have a bachelor's degree (46.05%), are single (81.58%), have no children at home (81.58%), are employed in organizations in the sector, and hold positions mostly in middle management (36.84%).

Using a significance level of .10 in the chi-square tests of independence ($p \leq .100$), the null hypothesis was rejected for all demographic variables. In other words, there is dependence between the variables of university degree ($p<0.001$), marital status ($p<0.001$), children ($p<0.001$), main activity ($p=0.053$), and position held ($p=0.009$), with the groups in which women in the Latin American agricultural sector were placed based on their glass ceiling beliefs.

Table 5 indicates the results of the correlation test conducted to ascertain the degree of relationship between beliefs regarding the glass ceiling and women's job satisfaction in the agricultural industry. It was found that job satisfaction has a very

small relation with the denial, resilience, and acceptance constructs and a small relation with the resignation construct.

Table 5
Correlation beliefs regarding the glass ceiling (n = 251)

Variable	Correlation coefficient
Denial	.016
Resignation	.331
Resilience	-.123
Acceptance	-.001

Note. Relation magnitude: .0 - .1 = very small; .1 - .3 = small; .3 - .5 = medium; .5 - .7 = large; .7 - .9 = very large; .9 - 1.0 = nearly perfect.

Conclusions

The findings of this study signal that women alumni of Zamorano working in the agricultural industry of Latin America exhibit overall satisfaction with their jobs. However, when examining each construct of job satisfaction, it becomes evident that job dissatisfaction arises in the operating conditions and pay. The pay construct refers to satisfaction with the remuneration received in exchange for work and with increases in remuneration (Paul Spector, 1997). Dissatisfaction with pay by women in the agricultural sector may be related to the fact that women in that sector commonly receive less pay for the same work compared to their male counterparts (SOFA Team & Doss, 2011). Research conducted by Behera and Behera (2013) and Thilmany (2000) are an example that, this inequality in remuneration may be affecting satisfaction with this facet in the sector, both at the informal (women working as day laborers in the rural area) and formal level (professional women working in the sector).

On the other hand, operating conditions refer to the different rules and procedures existing in the workplace (Spector, 1997). According to Blanding (2018), there is evidence showing that women are punished more harshly at work when they make mistakes compared to their male colleagues, and they are even 20% more likely to be fired for the offense. Similarly, Elmuti et al. (2009) mention there is inequality between men and women in the selection criteria used for promotions in the workplace. In most cases, these are advantageous to men. Therefore, the disparity in sanctions and selection processes, which are related to rules and procedures in the workplace, may be widespread in the region's agricultural industry and, therefore, could represent a reason for dissatisfaction. However, further studies are needed to identify the reasons for the dissatisfaction found in this study and expand this understanding to a broader audience in Latin America. Despite the finding of overall job satisfaction, it should be noted that the overall mean score was barely above the cut-off point of job satisfaction. This can mean a significant area for improvement in women's perception of job satisfaction. When exploring the k-means findings, job satisfaction or dissatisfaction differs based on women's level of education and the position held at work.

The findings of this study indicate that the predominant beliefs about the glass ceiling among women who have graduated from Zamorano and currently work in the Latin American agricultural sector are acceptance and resignation. Despite exploring

grouping by demographic characteristic through k-means, the groups are fairly similar in their perceptions. This finding suggests a discouraging outlook for women aiming to grow professionally within the agricultural industry of the region, as these constructs signal negative attitudes toward the pursuit of professional advancement (Smith et al., 2012), suggesting there may be barriers in the agricultural industry of Latin America that strength the glass ceiling preventing the achievement of gender parity in leadership positions. In a study conducted in the region with over 900 participants from various countries, authors identify that while there is a positive attitude toward women's involvement in the workplace, gender stereotypes embedded in a traditionalist belief influence a poor acceptance of women in leadership positions (Hermans et al., 2017). This is consistent with the role congruity theory (Eagly & Karau, 2002), as well as social role theory (Eagly, 1987), which posits that women are believed in society to be better suited to fulfilling family care roles and that they lack the necessary competence to fulfill leadership roles. As Hermans and colleagues (2017) mentioned, these ingrained attitudes in the region hinder women's advancement in the workplace and likely influence the beliefs found in this study.

Furthermore, these two predominant beliefs uncovered in this study have been found to affect personal well-being and performance at work. The belief in resignation is negatively related to happiness and emotional and physical well-being, while the belief in acceptance is negatively related to involvement or commitment at work (Smith et al., 2012). In other words, the prevailing glass ceiling beliefs among women alumni from Zamorano working in the agricultural sector can negatively affect women's overall well-being. At the same time, it may simultaneously interfere with the productivity goals of the industry, as there is a lack of sense of commitment at work, which may impact overall outcomes. According to Smith et al. (2012), the acceptance construct refers to items that can explain why women are satisfied and happy not to seek leadership or high-level positions. In the context of this study, women who graduated from Zamorano are aware there are barriers to their career advancement. However, they are content with not pursuing such professional growth. This can be interpreted as a personal justification for a lack of commitment to professional development. Smith and colleagues (2012) reached the conclusion that acceptance is a belief that favors family and other goals over career advancement. This can be explained as women following the gender role congruity of society (Eagly & Karau, 2002). In light of these considerations, it is reasonable to hypothesize that women in this study whose predominant belief was acceptance may be inclined to adhere to the gender role congruity ascribed to them by society and may not actively pursue professional advancement opportunities.

Overall, the findings of this study also indicate that it is plausible that women who graduate from Zamorano and work in the Latin American agricultural industry may have pursued leadership positions at some point in their professional lives. However, when they fail to attain them, they likely accepted the existing barriers and decided not to continue to try to overcome them. Especially considering that there is no significant relationship between job satisfaction and beliefs about the glass ceiling, i.e., beliefs about the glass ceiling do not influence their job satisfaction. These findings are partially similar to the findings of Smith and colleagues (2012), who found no significant relationships between job satisfaction and the resilience and acceptance constructs but did find substantial relationships with the denial and resignation constructs, which was not the case in this study. Finally, these findings suggest that the potential contributions of women to the regional economy may not be fully realized

unless significant changes are made to the workplace of the agricultural industry in the region. These changes must address the existing barriers that prevent women from advancing professionally and enhance their capacity to overcome these obstacles. Addressing this need may improve the perceived job satisfaction within the industry and foster women's overall well-being.

Recommendations/Implications

The purpose of this study was to explore the work environment experiences of women who graduated from Zamorano and are currently working in the agricultural industry of Latin America. However, it is not possible to generalize from the existing database to the entire universe of women in the region. Consequently, it is recommended that this study be replicated using other populations and disciplines to analyze a more comprehensive picture of the potential constrains limiting women's professional growth and advancement, with the aim to identify strategies that allow them to achieve their potential and provide benefit the industry. Additionally, it is recommended that specific studies be conducted to assess the two main constructs of job dissatisfaction among women (pay and operating conditions) to understand in depth those beliefs and to suggest improvement strategies for the sector. Finally, it is recommended that the prevailing beliefs about the glass ceiling be evaluated, as well as the effect of these beliefs on women´s occupational and personal well-being in the Latin American agricultural industry.

It is recommended that the agricultural industry in the region evaluate the existing barriers within their own work environments to minimize discrimination, family life demands, prejudice, and stereotypes that hinder women's growth in the professional ladder. It is recommended that the implementation of practical strategies that may support inclusiveness be explored in order to eliminate existing barriers. These strategies may include women's leadership programs, peer support groups, family support programs (i.e. daycare facilities within the company or flexible schedules), and overall inclusive policies.

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