



# Career Barriers of Women Architects in the Construction Sector

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## Abstract

It has been determined that the existing studies in the literature about women architects have remained in the background or ignored in the historical process, there are barriers they have encountered in the sector, their visibility in the sector is low and they have left the profession of architecture over time. However, it has been observed that it has not been investigated whether the career barriers that female architects encounter differ according to their career stages. The aim of this research is to fill the knowledge gap identified in this field in the literature and to reveal the career barriers faced by women architects. Quantitative research method was used in this study and data were collected by questionnaire method.

It has been understood that the glass ceiling and sexist attitudes, which are among the career barriers of female architects, differ according to career stages. The limitations of the research are that the participation of the participants in the research is based on voluntariness, contacting people through online platforms due to Covid 19, the research is carried out in a limited time frame and the opinions of the participants are limited to the questions in the measurement tools.

Within the construction industry, women architects face career barriers throughout their careers. Ensuring that more women architects take part in the construction sector will be an important step in reducing or eliminating such barriers. However, making individual efforts to prevent these barriers faced by female architects during their careers will not produce a real solution.

The research is considered important in that it has not been investigated whether the career barriers found to be faced by female architects differ according to career stages and in this context, this study is the first of its kind.

## Keywords:

*Career barriers, male-dominated structure of the construction industry, women architects.*

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## INTRODUCTION

It is an undeniable fact that men are dominant in architecture and construction activities both in the world and in our country. In the historical process, it has taken a long time for women architects to take an active role in the architectural profession. Today, it is observed that the demand of female students for architectural education has increased. At the same time, male and female architects who graduated from architecture schools have reached a mixed structure. However, the number of female architects graduating from architecture schools and the number of female architects appearing in the construction industry do not progress in a direct proportion. It is possible to associate this situation with the male-dominated structure of the construction sector in the literature. On the other hand, it is stated that female architects take a break from their career processes, leave their careers or encounter a series of barriers in their career processes.

The construction sector is known as a sector that demands intensive work and has a structure that makes people uninterested or unwilling with its stressful environment (Bennett et al., 1999, Fielden et al., 2000, Ling & Poh, 2004, Bilbo et al., 2014). In the literature, it is mentioned that women face this situation more and the construction industry is more resistant to women's entry into the industry. (Agapiou, 2002; Ling & Poh, 2004; Denissen & Saguy, 2014). Because the male-dominated image drawn by the construction industry makes tolerance to negative working conditions and masculine behaviors normal. This perception reduces women's interest in the sector (Agapiou, 2002, Ling & Poh, 2004, Denissen & Saguy, 2014).

Despite the negative image drawn by the industry, it is seen that the participation of female architects in architectural education in Turkey has increased and they graduated successfully. However, when we look at the records of the Chamber of Architects, it is stated that the number of graduated female architects and the number of female architects registered to Türkiye Mimarlar Odası do not match (Dostoğlu & Erkaslan, 2010). This contradiction is also encountered in the records of architectural organizations abroad. Due to the traditionally male-dominated structure of the construction industry and its culturally biased perspective, the view is that the industry is a more challenging field for women than for men (Fowler & Wilson, 2004; Gregory, 2006; ONS, 2009; Fielden, 2010; Architects' Council of Europe, 2018). In line with this information, the main purpose of this research is to reveal the career barriers faced by female architects in the construction sector, to collect these obstacles in a single source and to understand whether these career barriers differ according to career stages. In the literature research, career barriers faced by female architects in the construction sector were obtained from different sources. There are a number of qualitative and quantitative studies on these career barriers. With the information obtained, scales for career barriers were created and a survey was conducted with female architects. Thus, career barriers are included in a

single source and the exposure of women architects to these barriers has been re-examined. In addition, this study differs from other studies on female architects in that it investigates the exposure of female architects at different career stages to career barriers. Although there are many studies on the career barriers of female architects abroad, studies in Turkey are almost non-existent.

### **Female Architects in The Male-Dominated Field**

Societies define the person who should hold the architectural power in terms of their deep-rooted roles as those who have the power to govern. In the traditional structure, the strong and strong-willed person was accepted as a man (Grimes, 2007), while women were integrated with the concepts of mother and wife in the society, and this situation was reflected in the architectural profession by limiting the duties of female architects to residential architecture (Wright, 1997). Even when women started to take part in the architectural profession, they were not recognized as real architects (Grimes, 2007). The debate over whether women architects are architects or not was reflected in an article in the magazine called 'American Architect and Building News' (Wright, 1997).

Looking at the historical background, women have not been recognized in the history of architecture, mostly because they contribute to the built environment (Grimes, 2007). Women architects are also given little place in historiography (Grimes, 2007, Stratigakos, 2016, Sarıçelik, 2017, Alvarez & Gomez, 2017). Moreover, female architects do not appear in the historical record, they often remain in secondary status in the offices of their male colleagues, lose their individuality and are overshadowed by well-known male colleagues (Grimes, 2007). Thus, there are few documents about women architects in historiography. It is possible to list the reasons for this situation as the fact that the works of female architects do not survive or that these works cannot be preserved, and that female architects work under the body of competent male architects (Stratigakos, 2016).

From a current perspective, the construction industry continues to resist the entry of women into the construction industry with its traditionally rooted structure and a perspective based on cultural prejudices (Grimes, 2007). Because the construction industry, with its male-dominated image and brute force, draws an image that requires tolerance against unfavorable working conditions and rude speech. It is this image of the construction industry that renders women indifferent to the industry (Agapiou, 2002; Ling & Poh, 2004; Denissen & Saguy, 2014). According to a study conducted by Fielden et al. (2001), the construction industry has a male-dominated, macho image (Fielden et al., 2001). The construction industry is portrayed as a macho culture characterized by gendered colloquialism and conflicts, crises and conflicts that can be frightening for women working in the industry (Fielden et al., 2010). Due to this image of the construction industry and masculine approaches in

recruitment, women will not want to stay in the construction industry after graduation due to the difficulties of working in a male-dominated environment (Dainty et al., 2000, Hamel, 2009, Mavriplis et al., 2010, Kurtuluş & Tomaskovic-Devey, 2012). For example, although nearly half of the number of students graduating from architecture programs in the United States are women, 13% of the number of registered architects in the organization are women, and the construction industry, which is more abrasive for women, is still male-dominated (Gregory, 2006; ONS, 2009; Fielden, 2010; Architects). ' Council of Europe, 2018).

It is known that there are a significant number of barriers to women's participation in the construction industry and their taking up positions in the hierarchy of an organization (Amaratunga et al., 2006). When the management cadres of the companies in the construction sector are examined, it is seen that with the presence of these barriers, women are much less in the management positions than men (Woosnam, 2007; Fairs, 2017).

### **Working Conditions of Women Architects**

In studies focusing on women's careers, it has been seen that the barriers women face throughout their business life are considered important in terms of their career processes. There are also a number of barriers to the entry of women who want to take part in the construction industry (Dainty et al., 2000; Amaratunga et al., 2006; Powell et al., 2006; Thurairajah, 2007; Fielden et al., 2010; Fernando et al., 2014; Secatore & Young, 2016). These barriers are the image of the construction industry (Gale, 1994; Fielden et al., 2000; Fielden et al., 2001), career knowledge (Gale, 1994; Fielden et al., 2000; Agaipou, 2002), the culture and work environment of the construction industry. (Bennett et al., 1999; Dainty et al., 2000, Fielden et al., 2000), family (Fielden et al., 2000, Lingard & Francis, 2004), attitudes in recruitment (Fielden et al., 2000, Fielden et al., 2001) in the literature.

The construction industry is prejudiced against female workers (Amaratunga, 2006) and attitudes and behaviors in the construction industry are not woman-friendly (Afolobi et al., 2018). While male managers in the construction industry mostly hinder the recruitment of women and exhibit sexist attitudes in the recruitment of women (Dainty et al., 2001), on the contrary, some female architects are recruited to the organization they work for because of their gender and when they realize this situation, they leave the organization. (Dainty et al., 2001). In the construction industry, women are misjudged about their capacities when compared to their male counterparts (Chun et al., 2009). These misconceptions; The project was based on issues such as minimal recognition at the sites (Menches & Abraham, 2007), lack of role models/mentors (Yates, 2001), slow career development (English & LeJeune, 2012) (Afolabi et al., 2019). In the male-dominated construction industry, gender is an important factor in affecting job performance for both women and men (Denisen, 2006; Duke et al., 2013). However,

women in the construction industry historically; they are more likely than men to enter the sector, difficult working conditions, barriers to promotion, and dismissal (Berik & Bilginsoy 2006, Paap, 2006; Saucedo & Morales, 2010, Duke et al., 2013). In addition, in studies conducted, women state that they are concerned about the gender-based discrimination they encounter in the construction industry, unequal wage tariffs, and issues that affect their career progress, such as the management of work-family responsibilities (Loosemore & Waters 2004; Worrall et al., 2010; Watts, 2012; Worrall, 2012). ; Sang & Powell, 2012). Although women's employment in the construction sector is not new, they continue to experience the same barriers as women before them (Denisse, 2006; Aydın & Erbil, 2019).

In the male-dominated structure of the construction sector in terms of social roles, it is accepted that women are employed in offices instead of construction sites (Enshassi et al., 2008). According to the construction sector, the job skills of women working at construction sites are secondary when compared to their gender (Paap, 2006). On the other hand, men express masculine discourses to honor their work. Women stated that they felt powerless in the construction industry because of these situations and practices (Saucedo & Morales, 2010). Women are not satisfied with their professional life. This situation leads women away from the production areas where men in the construction industry work intensively and to office environments (Dostoğlu & Erkaslan 2010).

### **Career Barriers of Women Architects**

There are many studies on women architects. Studies have generally focused on the historical background (Adams & Tancred, 2000) or why women leave the profession (Anthony, 2001; De Graff-Johnson et al., 2003) (Caven, 2004). In this research, which was conducted to examine the career barriers of female architects, many studies involving female architects were examined. These studies include different sub-topics such as the entry of women into the architectural profession, the reflection of the female body in design, and the problems women face in the architectural profession. The scope of the study is on the career barriers of female architects. In the context of this scope, the barriers identified in the studies on women architects are included in Table 1 (Table 1).

Based on the studies, women architects are exposed to wage inequality, male-dominated structure, inflexible working hours, sexist attitudes, glass ceilings, *family-career balance* career barriers (Aydın 2021).

**Table 1.** Career barriers detected in the study

Career Problems Identified in the Study		Wage Inequalities	Working hours	Glass Ceilings	Male-Dominated Structure	Family Career Balance	Sexist Attitudes
Person doing the work	Name of the Study						
Agapiou, A. 2002.	Perceptions of gender roles and attitudes toward work among male and female operatives in the Scottish construction industry. <i>Construction Management &amp; Economics</i> , 20(8): 697-705.				+		+
Amaratunga, D., Richard, H. 2006.	Construction industry and women: A review of the barriers. In <i>Proceedings of the 3rd International SCRI Research Symposium</i> , Delft University, Netherlands.			+	+	+	+
Fowler, B., Wilson, F. 2004.	Women Architects and Their Discontents. <i>Sociology</i> , 38(1): 101-119				+	+	
De Graft-Johnson ve et al. 2003.	Why do women leave architecture? RIBA/University of West of England Research Project. London, RIBA.	+	+	+	+	+	+
De Madariaga, I., S. 2010.	Women in architecture: the Spanish case, <i>Urban Research &amp; Practice</i> , 3(2): 203-218.	+					+
Fielden, S., Davidson, M., Gale, A., Davey, C. 2010.	Women in construction: the untapped resource. <i>Construction Management and Economics</i> , 18(1): 2-9.				+	+	
Norma Isabel Figueroa Rubero 2008.	The masculine construction of the profession and women architects in practice in Puerto Rico, from 1960 to 1979				+		+
Gözde Yenipazarlı. 2006.	Türk İnşaat Sektöründe Liderlik Davranışları Üzerine Bir Araştırma. Yüksek Lisans Tezi, İTÜ Fen Bilimleri Enstitüsü, Mimarlık Anabilim Dalı, İstanbul.			+	+		
Grimes, S. E. 2007.	Women in the studios of men: Gender, architectural practice, and the careers of Sophia Hayden Bennett and Marion Mahony Griffin, 1870–1960. Ph.D Thesis, Faculty of the Graduate School, Saint Louis University Missouri, America.			+	+		+
Gürcanlı ve et al. 2018.	Şantiyelerde Çalışan Teknik Elemanların Çalışma Koşulları Üzerine Bir Alan Çalışması. <i>Çalışma ve Toplum</i> , 59(4).	+			+		+

### Current Research on Women Architects

When the studies are examined; Although there are many studies in the world that include the obstacles that women architects face in their professional careers, there are few studies on women architects in Turkey. Table 2 includes some of the prominent studies in the literature, which will help to identify the career barriers mentioned in this study, related to female architects in the literature review.



**Table 2.** Researches on women architects in Turkey and in the world

<b>Sharon E. Grimes 2007</b>	'Women face a number of different obstacles when they want to enter the profession of architecture. After receiving architectural education, many women can gain a place in the sector by being associated with a male colleague or through their spouses. It becomes impossible for them to have a sustainable career because they have limited workspaces.'
<b>Amaratunga ve et al. 2006</b>	'Women choosing careers in non-traditional sectors such as the construction industry face many barriers to enter and stay in their chosen industry. It is the male-dominated structure of the construction sector that reveals this situation in the construction sector. This structure drives women away from the construction industry.'
<b>Navarro-Astor ve et al. 2017</b>	'When the studies on women in the construction sector are examined; In most studies, multi-role conflict and the need to balance personal life with work is an almost exclusively female problem. In the face of such problems and responsibilities, women feel compelled to take a career break.'
<b>Merve Sarıçelik 2017</b>	'The architectural profession has a male-dominated environment. Although women took part in the profession, they could not find a place in architectural historiography. In this direction, it is possible to talk about the existence of an unequal and prejudiced historiography in architecture and art.'
<b>Nadiye Akyüz 2017</b>	'The positions of female architects in the offices of which they are partners are not determined professionally, but rather based on their gender. Women architects in partnership with co-family or male colleagues; has adopted in-office roles such as project design and project follow-up.'
<b>Gürcanlı ve et al. 2018</b>	'While factors such as the inconvenience of working hours of male and female technical staff, lack of holidays, workload, imbalances in work life, and the uncertainty of job responsibilities are the stress factors of the work environment, gender discrimination is added to these factors for women.'

## MATERIAL AND METHOD

The sample of the study consists of female architects in Turkey. An online survey study was prepared to collect data. The survey was conducted through 'online surveys', a web-based internet service, and by creating a survey-specific web address (<https://www.onlineanketler.com/s/kadinmimar>). The web address was sent to potential participants via e-mail. Between 23.03.2019-03.11.2020, 268 female architects participated in the survey.

The questionnaire created to collect data consists of 4 parts. These sections were collected under the headings of demographic characteristics (section 1), career barriers (section 2), women architects' perceptions of the structure of the construction industry (section 3), and suggestions of women architects on the structure of the construction

industry. The aim of the problems in the first section, which includes demographic characteristics, is to collect data on features such as the age of female architects, the number of children, the type of institution and sector they work, and their position in the institution. The second part of the questionnaire consists of questions about career barriers. This section consists of 6 different career barriers determined for female architects. The contents of these sections and questions are as in Table 3.

**Table 3.** Classification of survey questions on career barriers

CAREER BARRIERS	CONTENT OF THE SURVEY QUESTIONS
<b>Wage Inequality</b>	<ul style="list-style-type: none"><li>– Remuneration of men and women for the same work</li><li>– Transparency of the wage issue</li><li>– The factor of gender in determining wages</li></ul>
<b>Working hours</b>	<ul style="list-style-type: none"><li>– Flexibility of working hours</li><li>– Relationship between intensity of working hours and family-career balance</li></ul>
<b>Male-Dominated Structure</b>	<ul style="list-style-type: none"><li>– Structure of the construction industry</li><li>– Gender factor in task distribution</li><li>– Perspectives on women architects in the construction industry</li></ul>
<b>Sexist Attitudes</b>	<ul style="list-style-type: none"><li>– Impact of women-specific conditions</li><li>– Marital status</li><li>– The effect of gender on professional life</li></ul>
<b>Glass ceiling</b>	<ul style="list-style-type: none"><li>– Barriers placed by men that prevent women from progressing in the profession</li></ul>
<b>Family-Career Balance</b>	<ul style="list-style-type: none"><li>– Factors in balancing family and work life</li></ul>

In the third part of the survey, there are questions created to determine the perceptions that the construction industry is more challenging for women architects and full of barriers for women, according to their career stages. The fourth part of the questionnaire includes questions about the issues that they think should change in the structure of the construction industry for the professional careers of female architects. Survey questions were prepared in 5-point Likert type in order to collect data on career barriers (section 2), possible perceptions of female architects about the construction industry (section 3), suggestions of women architects on the structure of the construction industry (section 4). The options, score ranges and evaluation criteria for the answers to the items in the prepared questionnaire are as in Table 4.



**Table 4.** Scale and score ranges and evaluation criteria in the questionnaire (Tantekin Çelik & Laptah Oral 2013).

Options	Likert scale	Ranges	Evaluation Criteria
Absolutely agree	5	4.20-5.00	very high level
I agree	4	3.40-4.19	high level
Undecided	3	2.60-3.39	medium-level
I do not agree	2	1.80-2.59	at a low level
I strongly disagree	1	1.00-1.79	very little

SPSS 22 package program was used for the entry and statistical analysis of the data collected by the questionnaire. Descriptive analysis, reliability analysis and Kruskal Wallis test were performed for the study.

### FINDINGS OF THE RESEARCH

#### Performing Reliability Analysis

The Cronbach Alpha ( $\alpha$ ) value for the scale reliability of the questionnaire created for data collection was calculated as 0.875. According to this value, the scale was found to be highly reliable. Cronbach Alpha ( $\alpha$ ) values for the sub-dimensions of the scale are as in Table 5.

**Table 5.** Reliability values for scale sub-dimensions

Career Barriers	Variable	Confidence value ( $\alpha$ )
Wage Inequality	5	0,633
Working hours	3	0,751
Male-Dominated Structure	6	0,710
Sexist Attitudes	10	0,666
Glass ceiling	7	0,645
Family-Career Balance	5	0,652

Career barriers sub-dimensions and perceptions scales were determined as 'highly reliable' and recommendations scale as 'highly reliable'.

#### Profile Of Female Architects Surveyed

The majority of the female architects surveyed are in the early career stage. The percentages of female architects are close to each other in terms of marital status. The majority (81.7%) of the female architects participating in the survey are in the private sector. In terms of management experience, it was determined that 64.9% of the female

architects who participated in the survey did not have management experience. There are equal numbers of female architects with managerial experience in senior and second-level management levels. 49.6% of female architects work between 41-50 hours per week (Table 6).

**Table 6:** Profile of female architects participating in the study

		Frequency	Percent
Distribution by age	Early career stage	167	62
	mid career phase	62	23
	late career stage	37	14
	non-career	2	1
Marital status	The married	131	48,9
	Single	137	51,1
Professional experience years	2-5 years	111	41,4
	5-10 years	60	22,4
	10-15 years	28	10,4
	15-20 years	33	12,3
	20-30 years	29	10,8
	30+ years	7	2,6
Sectors they work	Public	49	18,3
	Special	219	81,7
Management status	Yes	94	35,1
	No	174	64,9
Management levels	Second Management Level	40	43
	Third Management Level	13	14
	Senior Manager	40	43
Weekly working hours	< 20 hours	9	3,4
	21-30 hours	15	5,6
	31-40 hours	68	25,4
	41-50 hours	133	49,6
	51-60 hours	33	12,3
	60> hours	10	3,7

**Findings on Career Barriers**

The findings of the survey conducted with women architects are given in Table 7. According to the arithmetic averages of wage inequality ( $\bar{X}$ = 3,5694), inflexible working hours ( $\bar{X}$ = 3.9366), male-dominated structure ( $\bar{X}$ = 3,5840) and family career balance scales, female architects stated that they were exposed to these career barriers at a high level. According to the arithmetic averages of the sexist attitudes ( $\bar{X}$ = 2.9586) and glass ceilings ( $\bar{X}$ = 3.3417) scales, female architects stated that they were exposed to these career barriers at a moderate level (Table 7).

**Table 7.** Findings on career barriers

		Arithmetic mean ( $\bar{X}$ )	Scale Average ( $\bar{X}$ )
<b>Wage Inequality</b>	For the same job, female architects work for lower wages than their male counterparts.	3,765	3,5694
	There is transparency about wages in working environments in the construction industry.	3,243	
	There is equality in terms of remuneration for male and female architects in recruitment.	3,243	
	A continuous increase in performance is expected in the business environment, but a specific wage increase is not recommended.	4,093	
	If I were a male architect, I think that I would be paid more for the work I do now.	3,101	
<b>Working hours</b>	Inflexible working hours make it difficult for women architects to balance their work and family lives.	4,019	3,9366
	The absence of part-time work in the construction industry makes it difficult for women architects to stay in the industry.	3,892	
	Freelancing (opening an office, outsourcing, etc.) is more attractive for female architects due to inflexible working hours.	3,899	
<b>Male-Dominated Structure</b>	In terms of enforcement power, the construction industry has a male-dominated structure.	3,877	3,5840
	In numerical terms, the structure of the construction industry is male-dominated.	4,116	
	The distribution of duties in the construction sector is determined based on gender.	3,713	
	In the construction industry; The network of crony relations between men isolates women architects in the business environment.	3,757	
	There are elements supporting female architects in the construction industry.	2,817	
	The construction industry accepts the visibility and effectiveness of women architects in the industry.	3,142	
	Women architects' unique situations such as motherhood, pregnancy and menstruation create a negative situation in their employment and business life.	3,836	2,9586

<b>Sexist Attitudes</b>	Marriage and fatherhood of male architects creates a negative situation in their employment and business life.	2,209	
	I often come across the phrase 'male architect' in job postings.	3,127	
	There are no specialized areas such as WCs for female architects in the construction site.	3,657	
	Since I am a woman, I have to do cleaning and tea service etc. at my workplace. I am expected to take charge of the subjects.	3,198	
	I encounter/hear about harassment against my female colleagues.	3,500	
	In the company I work for, women are given priority in matters such as promotion and wage increase.	2,328	
	In the company I work for, men are given priority in matters such as promotion and wage increase.	2,642	
	Being a woman has helped me recruit and advance my career.	2,343	
	I have been discriminated against on the basis of gender by a female colleague.	2,746	
<b>Glass ceiling</b>	It is more difficult for female architects to be promoted in the profession than male architects.	3,336	3,3417
	The advancement of female architects in the profession is limited compared to male architects.	3,377	
	The male-dominated structure of the industry makes senior promotions inaccessible for female architects.	3,373	
	In the construction sector, managers are generally men.	3,828	
	Promotion conditions are equivalent for male and female architects.	2,974	
	Women architects need to make more efforts in order to be in the upper levels in the construction industry.	3,660	
	In terms of career development, male and female architects have the same opportunity.	2,791	
<b>Family-Career</b>	Having children of female architects negatively affects their careers.	3,937	3,7530
	Women architects are supported to return to business life after having children.	3,306	

	There is a lack of female architect role-models balancing career and family life in the construction industry.	3,903	
	Having children does not offer an advantage for female architects in their working environment in the construction industry.	3,832	
	Working conditions in the construction industry are made in a more challenging environment for female architects.	3,787	

*Wage Inequality*

According to the data of the wage inequality career barrier scale, female architects state that they work for lower wages than their male counterparts. He is moderately involved in the transparency of remuneration in the work environment and gender equality in recruitment. He stated that there was no wage increase against the expectation of performance increase in the business environment. Participating female architects think that if they were male architects, they would work for higher wages.

*Inflexible Working Hours*

According to the data of the career barrier scale of inflexible working hours; inflexible working hours, for female architects make it difficult for female architects to balance their work and family lives. The absence of part-time working hours in the construction industry pushes women architects away from the construction industry. For female architects, freelance work is more attractive due to the flexibility of working hours.

*Male-Dominated Structure*

According to the data of the inflexible working hours career barrier scale, female architects think that the construction industry is male-dominated in terms of sanction power and numerically. He thinks that assignments in the construction sector are based on gender and that they are isolated in the relations between men in business relations. Women architects agree at a moderate level that there are no supporting elements for women architects in the construction industry and that the construction industry accepts the competence of women architects.

*Sexist Attitudes*

According to the data of the gendered attitudes career barrier scale, female architects state that women-specific situations create a negative situation in their employment and business life, while male architects state that marriage and having children do not create a negative situation. Women architects are often faced with the phrase "male architect" when hiring, they experience gender-based discrimination by their fellows, tea

service in the workplace, cleaning, etc. They also stated that they participated in the subjects of undertaking the subjects at a moderate level. Women architects think that there are no areas specific to women in working environments such as construction sites. Female architects stated that they faced harassment against their colleagues. Women architects did not agree that women are given priority in matters such as promotion and wages for women in the institutions they work in, but they expressed the same situation for men at a moderate level. Women architects stated that they do not agree with the fact that being a woman is an advantage in recruitment.

### *Glass Ceilings*

According to the data of the glass ceilings career barrier scale, it is more difficult for female architects to get promoted in the profession compared to male architects, the male-dominated structure of the industry makes top-level promotions inaccessible for female architects, the promotion conditions are equivalent for female and male architects, and female and male architects are more likely to be promoted in terms of career development. moderately participates in the subjects for which they have the same opportunity. He stated that their advancement in the profession is limited compared to male architects. Female architects think that the managers in the construction industry are generally male architects. Women architects think that they need to make more efforts to be in the upper levels of the construction industry.

### *Family-Career Balance*

According to the data of the Family-Career Balance Career Barrier Scale, female architects state that having children negatively affects their careers and having children does not offer an advantage for female architects in their working environment. She is moderately involved in being supported in returning to work after having a child. Women architects stated that there is a lack of female role-models in the construction industry, and the working conditions are made in a more challenging environment for female architects.

### **Determination of Career Barriers by Career Stages**

Career stages of the participants were determined in order to determine career barriers according to career stages.

**Table 8.** Career stages of female architects surveyed

Career Stages	Frekans	Percent (%)
Early Career Stage (22-34)	167	62
Mid Career Stage (35-50)	63	24
Late Career Stage (50-65)	36	13
65+	2	1
Total	268	100



62% (167 people) of the surveyed female architects are in the early career stage (22-35 years old), 24% (63 people) are in the mid-career stage (35-50), 13% (36 people) are in the late career stage (Table 8).

**Table 9.** Career barriers of surveyed women architects according to career stages

		N	average	sd	X2	p
Wage Inequality	Early Career Stage (22-34)	167	127,46	2	2,866	0,239
	Mid Career Stage (35-50)	62	142,04			
	Late Career Stage (50-65)	37	146,46			
Working Hours	Early Career Stage (22-34)	167	136,43	2	5,083	0,079
	Mid Career Stage (35-50)	62	140,97			
	Late Career Stage (50-65)	37	107,74			
Male-Dominated Structure	Early Career Stage (22-34)	167	137,93	2	4,217	0,121
	Mid Career Stage (35-50)	62	135,83			
	Late Career Stage (50-65)	37	109,59			
Sexist Attitudes	Early Career Stage (22-34)	167	129,16	2	6,029	0,049
	Mid Career Stage (35-50)	62	128,04			
	Late Career Stage (50-65)	37	162,23			
Glass ceiling	Early Career Stage (22-34)	167	120,67	2	12,842	0,002
	Mid Career Stage (35-50)	62	152,11			
	Late Career Stage (50-65)	37	160,22			
Male-Dominated Structure	Early Career Stage (22-34)	167	137,42	2	4,483	0,106
	Mid Career Stage (35-50)	62	137,69			
	Late Career Stage (50-65)	37	108,78			

In the study, the career barriers of female architects to create significant differences for female architects at different career stages were examined. In the results of the hypothesis test, there were no significant differences in terms of different career stages for career barriers coded as wage inequality, inflexible working hours, male-dominated structure and inability to establish a family-career balance. It has been concluded that there are significant differences for female architects in different career stages for career barriers coded as gendered attitudes and glass ceilings. While these career barriers are seen more in advanced career stages, it has been determined that they are less common in early career stages. In terms of glass ceilings career barrier, it is possible to associate this result with more encounters with glass

ceilings, as female architects have a higher chance of catching managerial positions in later career stages. Sexist attitudes examine career barriers, wage and promotion increases, and motherhood. Again, since these situations are seen more in advanced career stages, it makes it possible for female architects in advanced career stages to encounter more gendered attitudes (Table 9).

### COMPARISON OF FINDINGS

Comparison of the findings with similar studies according to the data obtained as a result of the study is as in figure 1.

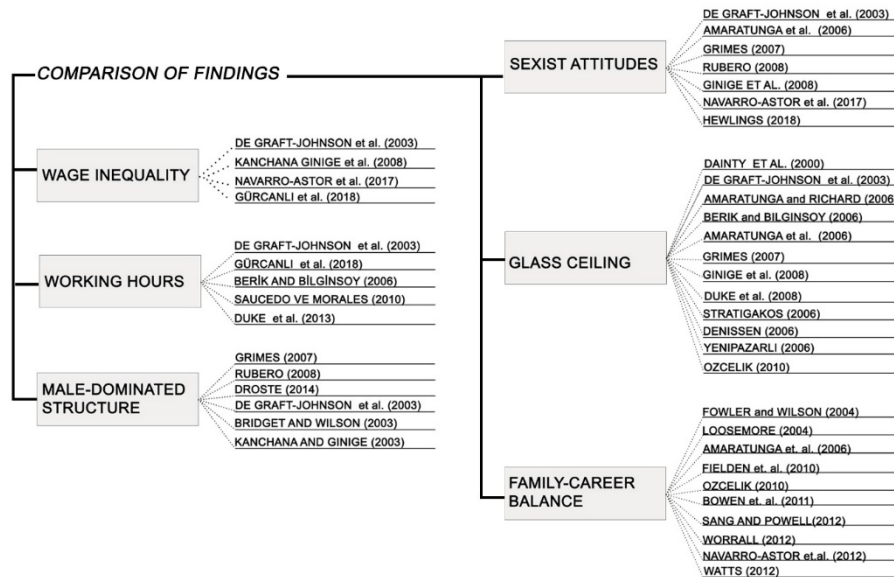


Figure 1. Comparison of the findings

### RESULT

According to the results obtained in the research, female architects stated that they were exposed to career barriers coded as wage inequality, inflexible working hours, male-dominated structure and family career balance at a high level, and that they were exposed to career barriers from gendered attitudes and glass ceilings at a moderate level. It has been observed that wage inequality arises as a result of career barriers, the fact that male and female architects receive different wages for the same work and there is no equality in terms of remuneration. Inflexible working hours emerge due to the general structure of the construction industry. The male-dominated structure stems from the traditional structure of the construction industry. It has been determined that the male-dominated career barrier has emerged as a result of the fact that men dominate the sector more numerically and in terms of authority, the distribution of duties is determined based on gender, and the visibility of female architects in the sector is low. It has been observed that the family-career balance is a result of the attitude that women architects face in their business life on having children.

It has been concluded that there is no differentiation according to career stages in the career barriers of wage inequality, inflexible working hours, male-dominated structure and inability to establish a family-

career balance. Female architects at different career stages are similarly exposed to these career barriers. However, it was concluded that career barriers such as sexist attitudes and glass ceiling barriers have significant differences for female architects at different career stages. According to the research, it is possible to say that female architects in the late career phase are most affected by the glass ceilings and sexist attitudes, which are career barriers, followed by female architects in the middle and early career phases. In terms of glass ceiling career barrier, it is possible to say that female architects have a higher chance of catching managerial positions in advanced career stages, and accordingly, female architects in advanced career stages are more likely to encounter glass ceilings. Sexist attitudes examine career barriers, wage and promotion increases, and motherhood. Again, since these situations are seen more in advanced career stages, it makes it possible for female architects in advanced career stages to encounter sexist attitudes more.

Within the construction industry, women architects face career barriers throughout their careers. Ensuring that more women architects take part in the construction sector will be an important step in reducing or eliminating such barriers. This will contribute to the efforts to increase women's employment, as well as to the country's economy by ensuring the continuity of people who have received vocational training in business life. However, making individual efforts to prevent these barriers faced by female architects during their careers will not produce a real solution. Instead, both the Chamber of Architects and the private sector should develop some measures together and raise awareness in order to overcome these barriers. Because such structural problems can be solved by collective action, not individual solutions. In order to ensure equal pay distributions, wages should be determined according to the nature of the job, not individuals. According to these determined fees, the Chamber of Architects should follow the fees paid by the companies/institutions to their members. Inflexible working hours, instead of limiting working hours in companies/institutions, working times can be stretched by completing weekly working hours or completing the given job. Certain criteria that do not include gender on the basis of companies/institutions can be applied in recruitment and promotion. In line with these criteria, recruitment or promotion can be made. Fair attitudes in recruitment and promotion will facilitate the placement of female architects in the sector and will positively affect the male-dominated structure of the construction sector. Child care units can be established in companies/institutions to provide a balance between family and career. It is of great importance that the measures taken are supervised by professional organizations in order to ensure that every measure to be taken is permanent and its continuity. In order to eliminate the ingrained perceptions of women about the structure of the construction industry, and to enable women architects to take a place in

the construction industry with equal opportunities with male architects, faculties of architecture can be informed about these issues.

### ACKNOWLEDGEMENTS/NOTES

This research study was made within the scope of the thesis titled 'EXAMINING THE CAREER BARRIERS OF WOMEN ARCHITECTS' carried out by Mevlüde AYDIN under the supervision of Prof. Dr. Yasemin ERBİL at Bursa Uludağ University Institute of Science, Department of Architecture.

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### Resume

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