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"This is a Very Male Job": Challenges Encountered by Females During Recruitment and Hiring for Engineering Jobs in Qatar

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“This is a very male job”: Challenges encountered by females during recruitment and hiring for engineering jobs in Qatar

Abstract

Although attracting women to STEM has been a concern in Western countries, female students across the Arab world are dominating most STEM educational programs. Engineering programs in countries like Qatar, the United Arab Emirates, and Jordan have more than double the U.S. national average of female students. At an American international branch campus offering engineering degrees in Qatar, females now make up approximately 51% percent of the student population. Despite a high number of female STEM graduates in countries like Qatar though, this does not always translate to representation and job satisfaction upon entering the workplace. Given Qatar’s significant focus on enhancing the role of women in the workplace and working on policies toward the empowerment of women, our exploratory research study examines how attractive the engineering profession is for women in Qatar. The current paper focuses specifically on challenges that women face during the very first step in their careers—the recruitment and hiring process.

The paper employs a multi-method approach, gathering and analyzing data obtained via a survey and interviews with engineering program alumnae who graduated from 2009 to 2020 in Qatar. When examining the challenges female participants faced during the recruitment and hiring process for engineering jobs in Qatar, the findings revealed that many women did not feel particularly welcomed while trying to obtain a job. Many faced personal/discriminatory interview questions, biases, and assumptions about what they could or could not do, in addition to being subjected to explicit discouragement and gender discrimination. The paper offers recommendations for addressing these issues as well as further areas of research to pursue. By bringing to light the issues surrounding females entering engineering professions in Qatar, this study offers a contribution to women’s role and empowerment in the region.

Introduction

While attracting women to STEM (Science, Technology, Engineering, and Mathematics) fields has been a steady concern in Western countries, female students across the Arab world are dominating most STEM educational programs [1-2]. Engineering programs in Arab countries like Qatar, the United Arab Emirates, and Jordan have more than double the U.S. national average of female students [1]. At an American international branch campus offering engineering degrees in Qatar, females now make up approximately 51% percent of the student population, thus achieving a male-female student ratio of almost 1:1. Consequently, STEM education programs in the Arab world have been praised for making great strides in gender equality [3-4]. In fact, the importance given to women’s education in Qatar has created what some scholars call a “reverse gender gap,” since Qatari national women are now overeducated in comparison to national men [5, p. 80].

As of April 2021, Qatar’s total population was reported as 2.65 million people, 72% male and 28% female. This large discrepancy between the overall male and female population is due to a large population of male migrant laborers, working predominantly in construction. Qatari nationals make up only approximately 10.5% of the total population. Among the nationals, the ratio of males to females is much closer, with the population of females being slightly more than males (See Figure 1) [6].

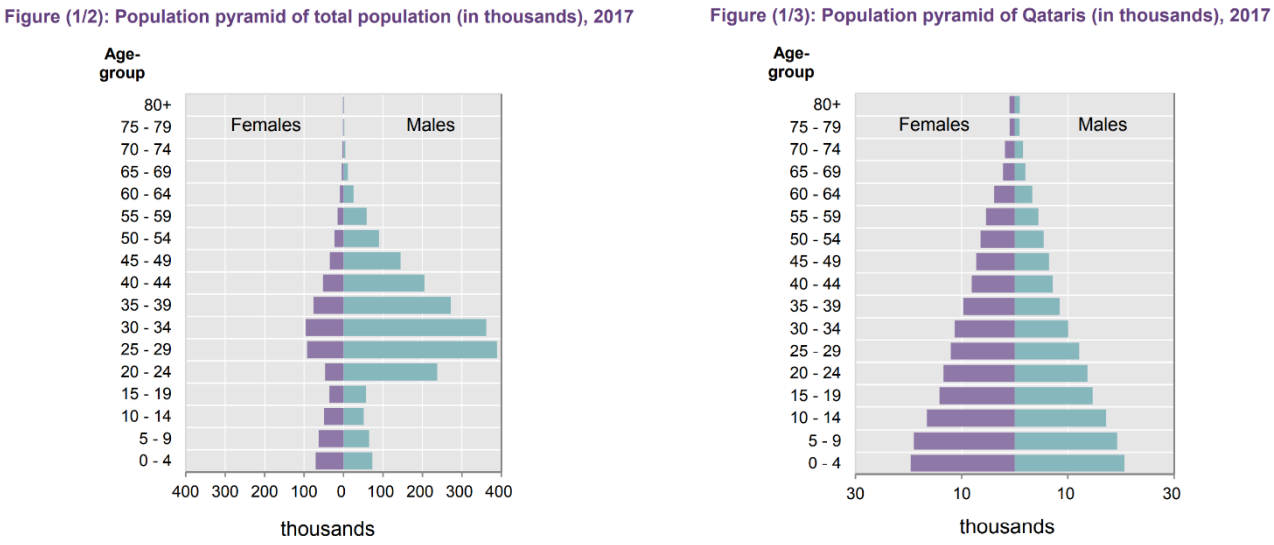

Figure 1. Population pyramid of total population (in thousands) vs Population pyramid of Qataris (in thousands). *Planning and Statistics Authority: Woman and Man in the State of Qatar*.

With respect to number of graduates from universities by gender in Qatar, the number of female graduates has been significantly more than male graduates and this number has continued to increase (See Figure 2) [6].

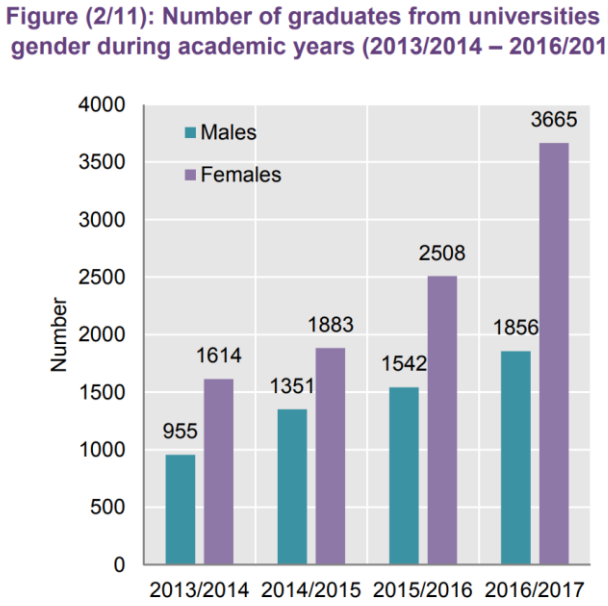

Figure 2. Number of graduates from universities by gender. *Planning and Statistics Authority: Woman and Man in the State of Qatar*.

Despite a high number of female STEM graduates in countries like Qatar, this does not always translate to representation and job satisfaction upon entering the workplace. While Qatar has made

enormous progress when it comes to legal and social advancement of women over the past two decades [3], females (Qatari and non-Qatari) still make up only 14% of the entire workforce in Qatar [8]and 63% of Qatari women are inactive in the labor force, compared to 33% of men (see Figure 3) [8].

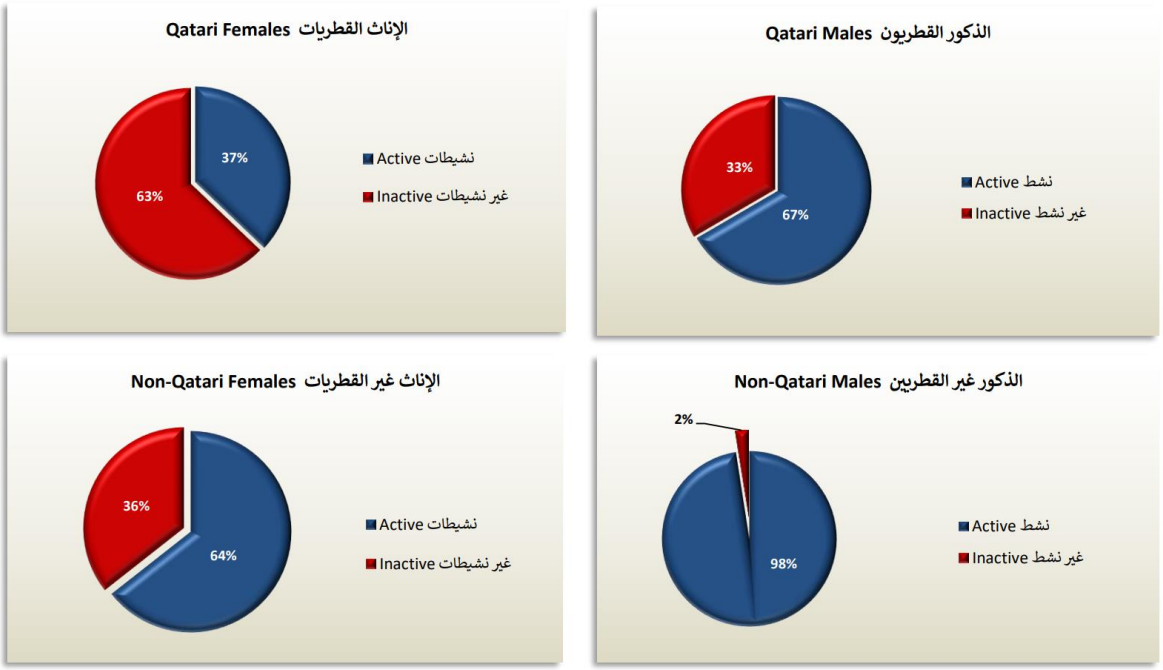

Figure 3. Population in Qatar economically active/inactive by nationality and sex. *Qatar Labor Force Survey, The second quarter of 2020*.

In the energy industry, women are still significantly under-represented; for instance, females account for only 7.8% of the workforce in the Qatari oil and gas industry, although the opportunities for women in the industry are growing [7].

It is important to note that sponsorships from companies and institutions within Qatar are provided to many Qatari national women before beginning university. These sponsorships cover the students' university tuition and guarantee them a job in the same institution immediately upon graduation. Students who receive sponsorships are typically required to work for the institution that funded their university experience for a minimum of four years. Because of this, female Qatari graduates often pass over the typical hiring process upon university graduation. Instead, they receive their funding based on interviews and applications during their transition from high school to university.

Given Qatar's significant focus on "enhancing women's role and empowerment through education and job creation" [3] and the importance of Qatar's construction, oil, and gas industry sectors, "the nurturing of female engineers is a task of high importance" [9, p. 7] to the State. However, the experiences of female engineers in Qatar have been only marginally researched [9-11] and the experiences of new female graduates during the recruitment and hiring stage has not been given

true consideration. It is important to understand women's introductory experiences with industry in order to understand more broadly how attractive the engineering field is for women in Qatar.

This paper focuses on understanding what challenges new female graduates face during the engineering recruitment and hiring process. The paper also provides recommendations to address and rectify these challenges.

Challenges for female engineers in the Arab Gulf States

There are many challenges reported regarding females working in the engineering profession in general, but some are contextual to the Middle East and Arab Gulf states.

For instance, in the Gulf states, where the oil and gas industry predominates the landscape, oil rigs continue to be male-dominated spaces and are not always viewed as suitable for women to work [5, p. 99]. The hot climate dominates most of the year and industrial facilities are relatively far from residential areas, tied to the assumption that the work is difficult for female engineers [13]. However, a study conducted in the UAE found that 36% of female engineers expressed their preference to work out in the field over working in an office (or having no preference), whereas only 22% of males preferred working in the field [13].

Even when hired, new female graduates report on being sidelined into non-technical positions with limited opportunities to progress or to have influence [12]. Cultural, social, family, work-environment, and "attitudinal barriers" influence heavily on women [4]. These include the patriarchal structure of the Arab Gulf states, gender stereotyping, the conservative nature of gender roles, the lack of women in leadership roles, lack of support for work-life balance, and perceptions about the nature of engineering work [14-15]. Qatari national women, for example, are more reluctant to work in the private sector and do not always find it attractive due to cultural and work climate factors; they feel that the energy industry needs to offer more flexible work policies in order to attract females to the sector [7]. Gender bias (both implicit and explicit) and sexism can be common in everyday interactions within the workplace, often pushing women out of STEM fields [16]. Additionally, women engineers report lacking self-confidence due to the overly male-dominance of the fields [17].

Female engineering students and graduates have previously reported experiences with sexism, gender bias, and discrimination during internship and job interviews, although this has not been examined in depth before [18-19]. Al-Khayarin et. al. [19] provide an example of an interviewer from an energy company in Qatar asking a female interviewee numerous times if she was fine with working offshore and even though she insisted she was, the interviewer commented, "Well, you better put it in your marriage contract for your spouse to get a house in [area near company] in the future" (p. 2). The student reported feeling upset by the immediate questioning of her commitment to the job and comments about her marriage contract. She felt there were more professional ways to approach concerns about job commitment.

Given Qatar's significant focus on enhancing the role of women in the workplace and working on policies toward the empowerment of women, this study asks the following research question:

RQ: What challenges do females face during the recruitment and hiring process for engineering jobs in Qatar?

Methodology

The current study is part of a larger exploratory research project examining 1) the experiences of female engineers in Qatar; and 2) the level of satisfaction with their job. The larger project employs a multi-method approach, gathering and analyzing data obtained via surveys, interviews, and focus groups with current female engineering students and alumnae of engineering programs in Qatar.

This paper examines the response to surveys and interviews of alumnae from chemical, mechanical, electrical, and petroleum engineering programs of an American international branch campus in Qatar.

Participants

A total of 100 alumnae participants completed our survey, which included female graduates from 2009 to 2020. From those who responded to the survey, 54% are currently working full time in a job that is directly related to their field of study. Table 1 provides some basic biographical data about the alumnae survey participants. Additionally, 28 alumnae participants agreed to participate in interviews. Table 2 provides some basic biographical data about the interview participants. In the branch campus, mechanical engineering accounts for the least number of female enrollment, which explains the 10% response rate from mechanical engineers in Table 2.

Table 1: Biographical Data of Survey Participants

Nationality	Female Qatari	71%
	Female Non-Qatari	29%
Years of Work Experience	none	15%
	< 2 years	37%
	2 - 4 years	15%
	5 - 9 years	29%
	10+ years	4%
Undergraduate Degree	Chemical Engineering	29%
	Mechanical Engineering	12%
	Electrical Engineering	38%
	Petroleum Engineering	21%

Table 2: Biographical Data of Interview Participants

Nationality	Female Qatari	44%
	Female Non-Qatari	56%
Graduating Class	2020	52%
	2018-2019	26%
	2013-2017	7%

	2009-2012	15%
Undergraduate Degree	Chemical Engineering	30%
	Mechanical Engineering	10%
	Electrical Engineering	30%
	Petroleum Engineering	30%

Data instruments and collection

The survey, 18 questions in total, was designed by the research team and had a mix of Likert scale, checkboxes, and open-ended questions. Topics covered related to workplace environments and policies, challenges and obstacles, and perceptions about skills/strategies females needed to succeed in the engineering sector in Qatar. The interview protocol included 15 questions, which were similar to the survey; topics ranged from why participants chose to study engineering, their experiences applying for jobs and transitioning from university to workplace, their overall workplace satisfaction, and what they thought Qatar could do to enhance women's role and empowerment in engineering professions in Qatar. The survey was sent out to all 440 alumnae who had obtained undergraduate degrees at the branch campus in Qatar with a survey response rate of 22.7% (however, data collection is ongoing). Individuals who indicated their willingness to participate in follow up interviews on the survey were contacted for interviews. The team additionally used criterion purposeful sampling in choosing alumnae to contact for interviews. The criterion included: 1) early career female engineering professionals with less than 5 years of experience; 2) female engineering professionals advanced in their careers with more than five years of experience; 3) alumnae not working in engineering fields. We also sought a mix of Qatari national participants and non-Qatari resident participants. Interviews were conducted by a minimum of two researchers over the Zoom digital platform and audio recorded.

Data analysis

The interviews were transcribed verbatim. Participants' response to Question 6, "Can you describe your experience applying and obtaining a job in the engineering sector in Qatar?" showed recurring themes. Specific words and phrases in all responses provided for Question 6 were highlighted in order to generate codes such as "positive experience" or "negative experience" and more specific codes like "sexism" or "discouragement." These were compared with responses to other questions in the interview as well as the survey, using a constant comparative method [20] to generate further codes, themes, and subthemes.

Findings

From our conducted survey, 48% of our participants reported that the career paths and opportunities for female engineers in Qatar are attractive. Many described their career path as challenging but rewarding. All the surveyed participants reported that they have received support from their families concerning their decision to become an engineer. Thus, there are positive aspects for many female engineers in Qatar. However, when specifically examining the experiences of our alumnae participants during the recruitment and hiring process for engineering jobs in Qatar, our participants reported more negative experiences than positive. They reported a number of challenges such as questions they perceived as discriminatory; they also reported

receiving biased or discriminatory comments during interviews or at career fairs, making them feel uncomfortable and discouraged. During job interviews, our participants were frequently asked questions related to their marital and family status. Based on this finding, we categorized experiences of our participants into three themes, although they overlap at times:

1. Personal/discriminatory interview questions
2. Biases and assumptions of interviewers
3. Explicit discouragement and discrimination from interviewers and recruiters

Personal / Discriminatory Interview Questions

During job interviews, participants expressed how they expected questions pertaining to their application and/or follow-up on their CVs. They prepared for questions related directly to their potential performance at work. However, most often, the first questions were about their marital and family status. These questions came both from male and female interviewers.

Example 1:

> Actually, one of the first questions that I get asked is not ... I would expect, “Where did you study" or "What degrees do you have?" or "What are your previous experiences?” No, those are not the questions that I get asked. The question that I get asked first is, “Are you married? Do you have kids?” Those questions are one of the first that I get asked... Sometimes actually they do prefer an unmarried single woman. They do prefer that lady just because they think that she will be more available to work. She will always prioritize work, so she doesn’t have kids or a husband or a family to take care of. Plus, she would accept working after hours or long on weekends or whatever because she’s not married.

Example 2:

> I actually talked to someone else who did it, also a female, and she's not married, so when she [the interviewer] asked her, "Are you willing to go onto the rig for three months?", she said, "yes, I'm very flexible with my time right now." She [the interviewer] told her, "Well, when you get married, will you be flexible?" It's these comments that make you question are they really okay with me being there or will me having kids in the future affect it, or does it affect their decision-making when they want to hire a female? I don't know.

Example 3:

> I was asked, “Are you married, or are you getting married soon?” I thought that was a very personal question. “I mean, not that it's any of your business, no, but why?” “Because you have a job opportunity at X, Y, Z and we thought maybe you would be interested.” I said, “come on guys, what does one have to do with the other?” But this is the question that I was asked. And when I pushed a little bit they said, because this is like a long-term job so you might have to be there for two or three years and we want to make sure that there's a full-on commitment during this time period and not other things that would interfere. I was very angry; I can tell you. I was not happy with that.

Such questions were deemed as discouraging and increased the insecurities of our participants applying for positions in the industry. They questioned if their personal life choices would impact their professional career. Our participants also felt that they were asked questions that their male colleagues would not be asked or that the interview process was merely a formality and that a female was not actually wanted for the position or sponsorship.

Example 1:

> I remember a similar thing happened to me for a job interview. It was at a site. So, they were asking me if I was able to work under the heat and work with heavy equipment and all, and I said yes, but I'm pretty sure they didn't ask a male applicant the same question. When I asked the guys [male colleagues], what did this guy [interviewer] tell them in the interview, he didn't really mention anything about it. He said it's just going to be hot, but he didn't really mention anything about, "oh, you might not be able to make it." So, I think they just assume we're not strong or we can't handle heat as guys. I don't know why, but yes.

Example 2:

> I've talked to previous female alumnae and they've talked about how there are certain jobs that they may apply for, but at the interview it will be clear, based off of what the interviewer is asking them, that they were not looking for a female for this job position or that kind of thing.

Our participants often asked their male colleagues about their interview experiences and what questions were asked and it was natural to make the comparison and then question why they seemed different. Such questions and comments created a sense that women may not actually be wanted in the field, even if the company was promoting hiring more women.

Biases and assumptions of interviewers

Participants mentioned that biases or predisposed assumptions about females exhibited from hiring managers and recruiters was another challenge they faced. One of the most common assumptions participants reported was that they were assumed to not be able to tolerate physical labor required for jobs on site because they are women. The participants faced this bias when trying to obtain a job and often felt that recruiters were condescending towards them. Rather than asking them about their work preferences, the questions were phrased in a manner that implied that females would most likely be working in an office job, particularly if they were Qatari nationals.

Example 1:

> I think sometimes for us, specifically, they assume that we are not capable enough to, for example, visit the rigs, so they always assume that we just want to work in offices and are too lazy to go there or afraid to be there.

Example 2:

> Hiring managers and recruiters have already decided that I am not a good fit, because of my gender. Issue is worse if covering or wearing *abaya* [full-length robe] or *hijab* [headscarf] if it is a male dominated company.

Another very commonly reported bias women faced was the assumption that they would not be committed to their career or able to take on certain roles because of their marital status or family life. Our participants repeatedly described how their commitment to their career or ability to advance was questioned because it was assumed they would not take on certain roles because of their parents, spouse, or children.

Example 1:

> I was being interviewed with a multinational company a few weeks ago. They saw my profile on LinkedIn. They really liked it and they tried to poach me from the company that I am in at the moment. Again, the same question, they said, "Are you single, married?" To be honest, I like to give people the benefit of the doubt. I said "No, I'm single. but why?" "You know, there is a lot of travel involved and we just want to make sure that you are mobile...." Again, this has nothing to do with anything. You can just ask me if I'm willing to move, if I'm willing to travel. You don't have to ask me if I'm single first.

Example 2:

> There is a good portion that asks about this [marital status] because they are of the impression, again, that it limits the mobility of the engineer, meaning if today I'm working on a project here and tomorrow they need me at a project in the UAE, or in Germany, or America, etc.., and will assume that if I have a family, that means suddenly I will not be able to mobilize, suddenly I'm not as attractive. Because I would have to consider my husband, and my kids and so on and so forth, so I would not be likely to move. However, that being said, they would not make the same assumption about men, not always. Why? Because they would assume that the man would move and then his family would follow, which can also be the case with a female, maybe not as common, but it can be. Again, they go with the assumption rather than a straightforward question.

Our participants faced awkward questions during interviews because of perceived gender roles. They expressed that it was uncomfortable to be asked if they planned to get married and they were often unsure how best to respond. They felt that such matters should have nothing to do with the hiring process, and even though the concerns about flexibility and commitment might be valid, they should be addressed directly. Participants felt that bias and assumptions about their gender put them at an unfair disadvantage.

Explicit discouragement and discrimination from interviewers and recruiters

Many of the participants also described instances in which they were explicitly told not to apply for a job because it was not where they belonged. Participants felt that career fairs and interactions with employees from human resources were sometimes discouraging during the application and hiring phases.

Example 1:

> "With all due respect, I just think it would be better that you don't apply here, that it would be better..." because I was wearing my *abaya* [full-length robe] at that time and they looked at me and they were like, "we don't know how you'll be able to work in that." Then they looked at me up and down. They're like, "it may be a bit difficult for you and I don't think this is a suited area of work for you, so I think you should apply somewhere else." I mean, I'm saying it in a much nicer way, but they had this odd tone. It actually left me pretty infuriated at the end.

Example 2:

> So, I remember during the career fair, one of the companies, which is a local company, the man who was working in the HR, I told him that, "I'm a mechanical engineer, do you offer jobs for females if possible?" Then he said, "what were you thinking of, choosing a mechanical engineering degree?" Then he said "that this is your problem. (laughs)" So, yes, it was that bad, but thankfully the company that I'm working at right now is actually very welcoming and they encourage females to work as engineers.

Example 3:

> He was like, "Can I make a suggestion? This may be unprofessional...", but he's like, "Don't come to this department." I was like, why? He's like, "This is a very male job." When I loosely translate it, he said, "this is a job for males and it's very hard for females." He suggested the other departments. So, I think that's kind of off-putting…

This kind of explicit discouragement and discrimination was not uncommon and while our participants were still able to obtain jobs, they felt that their options were more limited than their male colleagues and they were not valued as much.

Discussion and Recommendations

When specifically examining the challenges our alumnae participants faced during the recruitment and hiring process for engineering jobs in Qatar, the findings revealed that many women did not feel particularly welcomed while trying to obtain a job. Almost every single interview participant faced personal/discriminatory interview questions, biases, and assumptions about what they could or could not do, in addition to being subjected to explicit discouragement and gender discrimination.

Yet, the participants also discussed how many companies are seeking to hire more women following diversity and inclusion policies, and some are currently working with a quota to hire a minimum number of female engineers. Most of the engineering companies in Qatar also clearly state non-discriminatory policies and/or that they value diversity on their websites. A female graduate working for an international company based in the region stated:

> When I first joined my company, they had an active initiative. They wanted more female leaders in the company because they wanted to have a more equally represented leadership in the company, which I appreciated.

Therefore, participants felt that there is sometimes a mismatch between the image a company is promoting and the actual practices on the ground. If companies claim that they would like to hire more women, increase their diversity, and be more inclusive, they must provide an encouraging environment from the very first communication with a potential female job candidate.

Based on these findings, the research team strongly recommends that more internal trainings should be required for the hiring/recruiting teams to discuss which questions are appropriate/inappropriate during interviews and analyze specific wording of questions for bias/sexism. While we acknowledge that engineering companies do face real struggles with women leaving the industry when they have children or not wanting to work offshore, it is important for companies to recognize the value of diverse employees and put policies in place that allow women flexibility and better work-life balance. Engineering positions in industry are highly demanding, particularly those positions that require the engineer to go to the field on site or even off-shore. It can be difficult anywhere for a woman who is married with children and wants to have a successful career in industry to maintain a work-life balance. Conservative views about gender roles in Qatar and lack of flexible work policies can make it even more challenging, but this discussion should not be framed in a way that presents women as any less capable or committed than male colleagues. Our participants felt that companies could still have clear non-discriminatory policies during the hiring process that did not clash with cultural specificities and values.

From the findings, it is also clear that there is a gap in what female graduates expect in the recruitment and hiring process in comparison to what is happening. There should be stronger communication platform opportunities between university administrators and industries employing engineers about what females face during recruitment and interviews. Universities need to design more robust programs to support and equip their students with the skills needed to navigate these challenges. Alumni are often asked to come to their alma-matter during recruitment events and portray a positive image of their employer, but more conversations about the actual challenges of specific jobs would be beneficial too.

As a follow-up to this research, we suggest surveying and interviewing male graduates, as well as both female and male recruiting/hiring teams. It is also important to analyze the language in engineering job advertisements in Qatar. These need to be free from bias and discrimination in language or particular requirements that may prevent new female graduates from applying.

For large national and multinational companies, the benefits of a diverse workforce are well known and although diversity may come with specific challenges, the engineering sector should be no different. Over the last 20 years, the State of Qatar has made significant strides on the international scene and has increased their global presence and reputation, but more is needed to encourage young qualified women to enter the engineering work force.

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