



Women in Microwaves

What's the Hesitation?

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Robert Goodwin said, “One reason people resist change is because they focus on what they have to give up instead of what they have to gain.” This article brings together some of the many accomplished women from Pakistan. These ladies are working across the globe (indicated on the map in Figure 1). They share their efforts and one of their points in life where they faced hesitation and how they managed to overcome that hesitation. Such stories are a means of motivation for women facing different challenges across the

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world. These stories give us a lesson that, once given a chance, these hurdles can be reduced in a woman's life, and anything can be accomplished.

Mahrukh Khan

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Life is about choices or decisions that eventually shape our lives. All of us make choices, but some choices or decisions are more critical than others.

In 2008, while working at Suparco,

I desired to do a Ph.D. in microwaves abroad.

While I had this wish in my mind, there were many obstacles in my way; I was not sure which country I should go to or which country was the best for me, and I was not sure what my prospects would be if I made such a bold choice in my life. My family was not supportive of my wish to study alone and on my own. With these doubts and hesitations, I kept taking the National Testing Service test and submitting applications, and I was selected for several Higher Education Commission scholarships. Over six years, I was chosen for the German Academic Exchange Service (DAAD) (Germany), the Universities of Engineering, Science, and Technology, Pakistan, and a South Korea Scholarship. I was on the waiting list for the Fullbright scholarship, too. In all those scholarships, I applied with the wish to be selected but left them with a heavy heart because I was not sure or brave enough to pursue them.

I needed assurance or support. Then, one day, I put this wish in front of God and surrendered myself in front of Him for all those years that I kept running and got tired of applying, receiving, and leaving. It was

during the time that I was getting married, which my family arranged. Then, after marriage, I got the courage and took the most challenging and unknown path for a Ph.D., taking the Graduate Record Examinations test and applying blindly to many universities in the United States. How many offers I got, how would I choose one, and how I got to this point is a separate story, but I flew to the United States in 2013 with my five-month-old daughter and husband; the rest is history.

Mohaira Ahmad

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Progression in anything is uncomfortable. When it is in the professions, you have to improve your qualifications; when it is in relationships, you have to work on the dynamics of your relationship. You



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When I completed my M.S. degree from the National University of Science and Technology, one of the prestigious universities of Pakistan, I started working in a private university and was really enjoying the teaching until one day it was apparent that in order to stay in academia and progress, I had to enroll in a Ph.D. program

somewhere. Luckily, I received admission and a scholarship for my pursuit of a Ph.D. Any other person would have been very happy with this news, but somehow, I was reluctant. I was not ready to move on this journey. It was difficult, way out of my comfort zone. I had to move to another country, go back into student

mode, run my home, and raise a child. I was hesitating!

I needed the courage to choose a path, and with the support of my family, I made this choice and went to China along with my husband and a two-year-old son. During my Ph.D., my husband had to return to Pakistan, and another choice was waiting for me, the most difficult one, which was to let my son go with my husband. We women sometimes astonish ourselves, too, by making difficult decisions. I made my decision and hence followed the path of progress.

Maira I. Nabeel

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I come from a country where almost 50% of the population is female. According to a United Nations survey conducted in 2023, the labor force participation rate among women is 21%,

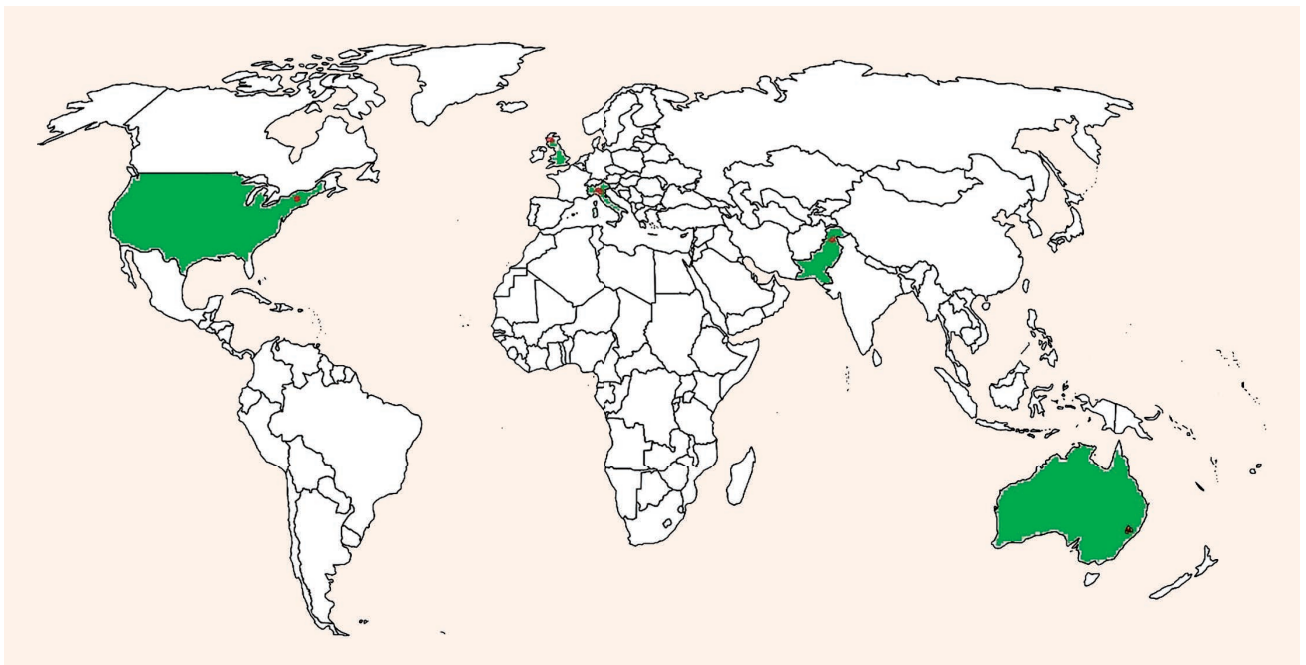


Figure 1. The locations of these Pakistani women working across the globe.

which is well below the global average of 39%. Among these working women, only 2.5% work in the science, technology, engineering, and mathematics fields. It is challenging for married women to continue their professional careers, due to various factors, such as societal pressure, unsupportive family dynamics, and limited childcare facilities. However, I have been fortunate to have a very supportive family, particularly my spouse and my father, which has allowed me to be among the 3%–4% of female engineers in Pakistan who have had the opportunity to work at a top national university at a level equivalent to their male counterparts with similar educational qualifications.

Throughout my career, I have faced challenging decisions. I was teaching at one of the most prestigious universities in Pakistan, but my position was stagnant, and I needed a Ph.D. degree for my career progression. During that time, I received a fully funded opportunity for a Ph.D., but it was postponed due to COVID-19. Later, the opportunity arose again, but I hesitated to pursue it since I have two daughters, and managing in a foreign country seemed challenging under my circumstances. However, I decided to move forward, realizing that I couldn't let the opportunity pass by a second time and recognizing that progress often comes with challenges. Embracing change is essential for growth. Once you choose and commit to something, things become more manageable, especially when you're determined to reach your goals. Remember, the first step is always the hardest, but you can achieve anything with commitment and a strong support system.

Aqeela Saghir

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In [1], I share my story of my engineering career, where I experienced some great highs and lows in life. In 2017,



my Ph.D. funding ended, and since I was very patriotic and homesick, I did not look for extensions or other opportunities abroad and moved back to my country. I immediately was employed in a well-regarded government organization. However, due to unforeseen circumstances, I had to quit the job in April 2019, and due to my financial constraints, I immediately had to take another short contract job.

The very same year, I was considering a marriage proposal, in which the conditions were to quit both my job and Ph.D. Unfortunately, it is very normal in some families in our society that women are meant only for the home. Luckily, things didn't work out, but the overall experience was emotionally draining for me. With very little hope and a lot of self-doubt, I summoned up the courage to apply again for a job abroad. I decided to overcome the hesitation that I had, to go abroad, and to fight with all my emotions.

Finally, I received an interview call from the LINKS Foundation. I put in my maximum effort for the interview. The effort paid off, and I was selected for a second interview. Meanwhile, unexpectedly, my funding for the project I was working on in Pakistan stopped, and the project was closing down. At that time, nothing was working out on a personal or professional level. I started questioning my abilities until the opportunity at the LINKS Foundation appeared. This is my fifth year working here, and I have experienced and learned a lot in the field of RF and microwaves by overcoming the hesitation to move abroad.

Hira Hameed

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During my first year of Ph.D. studies, I encountered a major challenge while preparing for an international conference. Despite my initial confidence, I experienced self-doubt after receiving critical feedback from senior colleagues. The pressure of presenting my research on artificial intelligence to renowned experts made me consider withdrawing from the event.

During my Ph.D., my husband had to return to Pakistan, and another choice was waiting for me, the most difficult one, which was to let my son go with my husband.

Feeling overwhelmed, I sought advice from my mentor, my professor. He reminded me of my achievements and reassured me that self-doubt is a normal part of the academic journey.

Encouraged by his support, I refined my presentation, practiced diligently, and sought feedback from trusted colleagues.

On the day of the conference, I was nervous but prepared. As I presented, my confidence grew. I effectively communicated my findings, addressed questions, and received valuable feedback. This experience boosted my confidence, provided me with insights and connections, and taught me that overcoming hesitation is essential for growth. This pivotal moment reinforced my belief in my abilities and my determination to continue my research.

Reference

- [1] A. Saghir, "A journey of continuous learning [Women in Microwaves]," *IEEE Microw. Mag.*, vol. 22, no. 1, pp. 86–88, Jan. 2021, doi: [10.1109/MMM.2020.3027942](https://doi.org/10.1109/MMM.2020.3027942).

