

‘Nevertheless, she persisted’: Women’s work experiences in STEM fields in Antofagasta, Chile

‘No obstante, ella persistió’: experiencias laborales de mujeres en STEM en Antofagasta, Chile

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Background

In the fields of science, technology, engineering, and mathematics (STEM), women remain underrepresented, particularly in the professional sphere. This scarcity is not only explained by low enrollment of women in higher education but also because some migrate to other areas or industries due to obstacles they face, including discrimination and gender stereotypes. These hurdles often translate into difficulties accessing prestigious jobs, which are typically privileged for men. Despite these challenges, some women choose to remain in these roles and persist in their professional development. In Chile, the northern region of Antofagasta presents a unique context for exploring this issue, especially within the mining industry and associated fields. This industry is known for its highly masculinized environment, which excludes women from roles traditionally deemed feminine, such as food service, cleaning, or administration. Evidence in the mining industry reveals a social hierarchy that favors men, legitimized by organizational culture, where women must continually prove that being female does not hinder professional development beyond feminized tasks.

Aims

The aim of this qualitative research was to analyze the interpersonal experiences, both favorable and unfavorable, of women working in STEM areas in the region of Antofagasta, Chile. Additionally, it aimed to explore the processes of professional agency influencing their persistence in highly masculinized work contexts, such as the mining industry.

Method & procedures

This research followed a phenomenological-interpretative approach, delving into the subjectivity of individuals and

their lived experiences. Approved by the Universidad Católica del Norte, the research involved convenience sampling of 12 women with over 10 years of experience in STEM fields within the Antofagasta region, Chile. These women were part of the "LIQCAU Program: Women in STEM," chosen for diversity in academic background, field of work, and position. In-depth interviews explored autobiographical milestones associated with their professional trajectories, followed by content analysis.

Results & discussion

Participants recounted both favorable and unfavorable interpersonal experiences in their workplaces. They received technical or socioemotional support and recognition of professional competencies, from both men and women. These positive experiences enhanced their technical skills, shielded them from gender discrimination, acknowledged their contributions, and provided opportunities for growth. Nevertheless, participants faced numerous challenges, including workplace harassment or abuse, criticism of their abilities, and intellectual property theft. These discriminatory practices, rooted in gender and power imbalances, impede women's professional advancement in STEM. To overcome these challenges, participants exhibited professional agency, setting boundaries, persisting in their goals, validating their expertise, and challenging biases. Professional agency enabled them to navigate and endure in masculinized environments.

Conclusion

This qualitative study examined the interpersonal experiences of women in STEM fields in Antofagasta, Chile, and explored the role of professional agency in their persistence in masculinized work settings, such as the mining industry. Women in the northern region of Chile, particularly in the mining sector, encountered both favorable and unfavorable experiences during their professional journeys. Despite facing obstacles, their professional agency protected them and positively influenced their organizational experiences. While much of this agency is reactive to adverse situations, it also empowers women to define and pursue their goals with perseverance and determination.

Keywords: gender, gender violence, masculinized work environment, professional agency, STEM trajectories

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