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MULHERES EM STEM: INTELIGÊNCIA EMOCIONAL INFLUENCIA NA PERCEPÇÃO DAS BARREIRAS?

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Resumo

A existência de diversas barreiras no início da trajetória profissional das mulheres é um fator preocupante, pois por muito tempo elas foram totalmente excluídas das áreas STEM. Este estudo teve como objetivo investigar como a inteligência emocional afeta a percepção e o enfrentamento de barreiras de carreira de mulheres em carreiras STEM. Um total de 119 estudantes brasileiras e trabalhadoras em STEM participaram de uma pesquisa online, respondendo ao Career Barriers Likelihood and Coping Inventory, além da Emotional Intelligence Measure (EIM). Os resultados da análise de regressão múltipla indicaram que quanto maior a inteligência emocional, maiores as taxas de percepção de enfrentamento de barreiras de carreira. No entanto, não houve relações significativas entre inteligência emocional e percepção de barreiras na carreira, o que indica que elas persistem independentemente do comportamento e das emoções das mulheres. Assim, destacamos a necessidade do desenvolvimento de políticas e práticas organizacionais e educacionais que valorizem a mulher e melhorem o ambiente de trabalho, não contando apenas com sua inteligência emocional para lidar com contextos hostis.

Palavras-chave: mulheres; barreiras; inteligência emocional; carreiras STEM; mercado de trabalho.

Abstract

The existence of several barriers early on in women's professional trajectory is a worrying factor, as for a long time they were completely excluded from STEM fields. This study aimed to investigate how emotional intelligence affects the career barriers likelihood and coping of women in STEM careers. A total of 119 Brazilian students and working women in STEM participated in an online survey, responding to the Career Barriers Likelihood and Coping Inventory, besides Emotional Intelligence Measure (EIM). The results of multiple regression analysis indicated that the higher the emotional intelligence, the higher the rates of career barrier coping perception. However, there were no significant relationships between emotional intelligence and career barrier likelihood, which signals that they persist regardless of women's behavior and emotions. Thus, we highlight the need for the development of organizational and educational policies and practices that value women and improve the work environment, not only relying upon their emotional intelligence to cope with hostile contexts.

Keywords: women; barriers; emotional intelligence; STEM careers; job market.

1. Introduction

Considering women worldwide, only 46.6% of them are formally in the labor market (International Labour Organization - ILO, 2022). Regarding Latin America and Brazil, although women represent 57% of Brazilian university entrants (INEP, 2020), only 45.8% of them are formally working (IBGE, 2021). Data from ILO (2021) shows that although women are continuously more qualified, the more senior the position, the smaller the share of women.

The scenario is worsened when considering women in Science, Technology, Engineering, and Mathematics or the STEM fields, in which they are represented by only 35% of all students around the world (UNESCO, 2019), despite the significant increase in professional demand lately (WIESELMANN, ROEHRIG; KIM, 2020). Men are still the majority in STEM disciplines (ILO, 2022), as women are only around 37.8% of tertiary STEM graduates (UNESCO, 2019). As a way of tackling inequities in income and opportunities, the inclusion of women in STEM constitutes one of the pillars of the 5th UN's Sustainable Development Goal (SDG), the gender equality goal (UN, 2015).

However, the existence of several barriers early on in women's professional trajectory is still a worrying factor, as for a long time they were completely excluded from STEM fields (HAERTEL; CARVALHO, 2017). Thus, research initiatives that seek to investigate strategies for women to develop STEM careers are very necessary (SASS et al., 2018). Focusing on which factors may retain more women in STEM is important because such fields are often strategic, being closely connected to the understanding of the natural world and the construction of the physical one (SCHMADER, 2022).

Existing research does not suggest substantial differences in ability that would justify women's underrepresentation in STEM fields, such that the most evidence-based explanations are the cultural structures and the internalized stereotypes regarding women's abilities and work preferences (SCHMADER, 2022). The literature has been consistent in evidencing the variety of reasons that avert girls and women to major in STEM disciplines, involving both individual and contextual factors. Cultural stereotypes, gender biases, microaggressions, lack of role models and mentors, lack of support and encouragement, gender discrimination, excessive demands and low level of self-efficacy are among the most cited (OLIVEIRA-SILVA; PARREIRA, 2022; BOFFI; OLIVEIRA-SILVA, 2021). During COVID-19, a study by Dunn et al. (2022) suggested, for instance, that the pre-existing and pervasive institutional, systemic and psychological barriers were further exacerbated by familial barriers for female STEM faculty.

Although the success of female recruitment and retention in STEM depends heavily on contextual aspects and how much support is offered (BOFFI; OLIVEIRA-SILVA, 2021), structural changes may be slow. Therefore, women often manage to survive in these work environments mostly due to their agency, determination, resilience and interest, as well as focusing on strengthening self-concepts and coping strategies (PRIETO-RODRIGUEZ et al, 2022; OLIVEIRA-SILVA; PARREIRA, 2022; HENDERSON et al, 2022). In that sense, it is important to comprehend what part personal variables such as emotional intelligence can play.

Emotional intelligence has been a current topic especially when referred to professional competence (GOLEMAN, 2001). Interest has grown in studies that evidence how emotionally intelligent people achieve professional and personal success as they can self-motivate and develop skills for problem-solving on a daily basis (SILVA et al., 2017). The definition of emotional intelligence is related to the domains described by Mayer and Salovey (1997), being divided into two main factors. The first is personal competence, which encompasses self-knowledge (or self-awareness), self-control, and

motivation. The second is social competence, which involves empathy and social skills, besides knowing how to deal with relationships. Emotional intelligence is often related to career aspects and provides an individual with the psychological resources necessary for effective career decision-making (VASHISHT; KAUSHAL; VASHISHT, 2021; FRENZEL, 2020; PICO-SALTOS, et al, 2021).

A review by Brescoll (2016) indicates that female leaders can be penalized for displays of emotion, especially when the emotion conveys dominance (e.g., anger or pride). At the same time, if they are emotionally unexpressive, it may also result in penalties, as unemotional women are not supposedly fulfilling their warm, communal role. It is important to better understand the importance of emotional intelligence for women at work. So far, studies have found significant correlations between overall emotional intelligence scores and subjective well-being (REMA; GUPTA, 2021), as well as with job satisfaction (WIJAYATI, KAUTSAR; KARWANTO, 2020).

Research initiatives that seek to investigate strategies for women to develop STEM careers are very urgent. Unfortunately, few studies go deeper into the impact of emotional intelligence in women's careers, let alone analyze how it could influence barriers likelihood and coping perceptions among women in STEM. For this reason, this research hypothesizes that:

1) Women with higher levels of emotional intelligence will present lower perception of career barriers likelihood;

2) Women with higher levels of emotional intelligence will present higher perception of career barriers coping.

This study aims to investigate how emotional intelligence affects the perception of barriers and the ability to cope in women in STEM careers. We expect to contribute to the understanding of how the management of emotions affects women's careers, providing grounds for the development of strategies to retain more women in STEM. Additionally, we aim to investigate whether developing emotional intelligence would be enough for women to overcome barriers at work, or whether these barriers exceed what could be done at the individual level.

2. Complete Report

2.1. Sample

The study was carried out with 119 Brazilian women, older than 18 and a mean age of 24.3 years (SD = 7.96). Most of them (60.5%) were in higher education or were enrolled/had finished their graduate studies (25.2%). Considering graduation/work fields, 22.7% were in the Sciences, 40.3% in Engineering, 26.1% in Technology and 10.1% in Math. Regarding current work, 58% of the women in the sample were currently employed and 42% were not. Regarding STEM fields, 23.5% worked in technology and computing, 13.4% in research, 8.4% in engineering, 2.5% in mathematics, and 5% in agriculture. Some of them were in areas that were not their initial STEM field of training and education (human resources, sales, schools, among others). Only 16.8% held management positions, with 73.3% earning less than 3 minimum wages.

2.2. Instruments

The instruments used were the Emotional Intelligence Measurement (EIM), the Career Barriers Likelihood and Coping Inventory (CBI-Likelihood and CBI-Coping), and a sociodemographic questionnaire. The EIM was developed and adapted to Brazil by Siqueira, Barbosa, and Alves (1999). Its internal consistency is equal to 0.89 and answers are presented on a four-point Likert scale. The scale has 59 items, distributed in five dimensions: Empathy, Sociability, Self-motivation, Self-control and Self-knowledge, with alphas' factors ranging from 0.78 to 0.87.

The Career Barriers Inventory (CBI) used in this study was a adapted version developed by Frutuoso (2022). It presents 49 items, on a Likert scale with seven points, considering the following question: "How likely are you to encounter this barrier in your future career?". It is necessary to point out that the present study did not use the word "future", since there were participants who were already in the labor market. For the students, the goal was to measure their barrier perceptions since graduation. The incial scale presents 49 items and 7 factors, with alphas' factors ranging from 0.64 to 0.86, with an alpha of 0.77 for the whole scale (RAIFF, 2004), while the Brazilian version (FRUTUOSO, 2022) presents 35 items distributed in 4 factors, with alphas ranging from 0.88 to 0.94 and an overall alpha of 0.95. As this study was carried out before Frutuoso's (2022) study was published, we are considering Raiff's (2004) original factor structure and items.

CBI-Likelihood items are grouped into six main factors: Planning and development, Family planning, Racial discrimination, Sex discrimination, Job

inadequacy, and Disapproval of others. The CBI-Coping is based on the same items and factors from the CBI-Likelihood, just adding the question of how likely the respondent would be to overcome that barrier.

2.3. Procedures and data analysis

Participants were recruited through social networks and snowball sampling. In the disclosure page, they could access a link to a *Google Forms* page with information regarding the research, such as goals and duration, as well as researchers' contacts and institutional affiliation. They also could read the consent form, which declared that answers would remain anonymous and be aggregated to an unidentified database.

Descriptive and central tendency analyses were performed to describe the sample and perform initial data analysis. Bivariate Pearson correlations and standard multiple regression analyses were performed to test hypotheses. The data were analyzed in SPSS (Statistical Package for the Social Sciences), version 20.

2.4. Results

According to Table 1, self-motivation and empathy were the emotional intelligence factors with the highest means. On the other hand, the lowest means were for self-control and sociability. For barriers coping, means were slightly above the scale midpoint. The highest means were for Planning and development and Sex discrimination, while the lowest was for Inadequacy of work and Disapproval of others. Correlation results indicated that there were no significant relationships between emotional intelligence and career barriers likelihood. Regarding career barrier coping, there was a significant and positive correlation between emotional intelligence and barrier coping.

Table 1. Means and bivariate correlations between factors of emotional intelligence and barrier coping

	MEAN (SD)	1	2	3	4	5	6	7	8	9	10	11	12	13
1. EIOVER	2.62 (0.28)	1												
2. IESA	2.62 (0.35)	.733**	1											
3. EISM	2.71 (0.39)	.757**	.592**	1										

4. EISC	2.36 (0.28)	.707**	.488**	.517**	1								
5. EIEMP	2.75 (0.51)	.829**	.486**	.412**	.461**	1							
6. EISOC	2.60 (0.32)	.679**	.334**	.349**	.401**	.469**	1						
7. BCOVER	4.34 (1.41)	.315**	.235*	.472**	.191*	.109	.210*	1					
8. BCPD	4.58 (1.47)	.305**	.261**	.491**	.181*	.080	.182*	.945**	1				
9. BCRD	4.22 (1.52)	.302**	.218*	.423**	.135	.141	.211*	.954**	.871**	1			
10. BCJI	4.01 (1.71)	.179	.174	.335**	.140	.019	.057	.818**	.687**	.725**	1		
11. BCDO	4.09 (1.70)	.271**	.211*	.410**	.140	.072	.224*	.898**	.789**	.837**	.733**	1	
12. BCFP	4.54 (1.54)	.421**	.226*	.484**	.302**	.249**	.317**	.832**	.788**	.759**	.670**	.700**	1
13. BCSD	4.56 (1.55)	.242**	.105	.349**	.229*	.080	.186*	.846**	.770**	.809**	.638**	.713**	.623** 1

Note: *p<0.05, ** p<0.01. EIOVER: General Emotional Intelligence, IESA: Emotional Intelligence - Self-Awareness, EISM: Emotional Intelligence - Self-Motivation, EISC: Emotional Intelligence - Self-Control, EIEMP: Emotional Intelligence - Empathy, EISOC: Emotional Intelligence - Sociability, BCOVER: General Barrier Coping, BCPD: Barrier Coping - Planning and Development, BCRD: Barrier Coping - Racial Discrimination, BCJI: Barrier Coping - Job Inadequacy, BCDO: Barrier Coping - Disapproval of Others, BCFP: Barrier Coping - Family Planning, BCSD: Barrier Coping - Sex Discrimination.

Correlation values show that only the Job inadequacy factor regarding career barrier coping did not show a significant relationship with Emotional Intelligence. All other career barrier coping factors were significatively correlated to Emotional Intelligence. Overall, Emotional Intelligence presented higher correlations with coping factors such as Family planning and Planning and development. On the other hand, the lowest correlation values were between Emotional Intelligence and Sex discrimination and Disapproval of others.

Regarding EI factors, only Empathy did not significatively correlate with barrier coping. All the other factors presented significant correlations, such that self-motivation and self-knowledge presented the highest correlations with overall barrier coping, while sociability and self-control showed the lowest. Regarding hypotheses, only Hypothesis 2 was corroborated since emotional intelligence did not significantly predict barrier likelihood, regression results were significant for barrier coping. Therefore, emotional intelligence influences barrier coping perception, but not barrier likelihood, as shown in Table 2.

Table 2. Significant regression coefficients, β and R^2 (between parenthesis), for subfactors of emotional intelligence and barrier coping

	BC PD	BC RD	BC JI	BC DO	BC FP	BC SD
IESA	.261** (.06**)	.218* (.04)	-	.211* (.04)	.226* (.05)	-
EISM	.491* (.24***)	.423*** (.17***)	.335** (.11***)	.410*** (.16**)	.484** (.23***)	.349*** (.12***)
EISC	.181* (.03*)	-	-	-	.302*** (.09***)	.229* (.05*)
EIEMP	-	-	-	-	.249** .06**	-
EISOC	.182* (.03*)	.211* (.04*)		.224* (.05*)	.317*** (.10***)	.186* . (.03*)

Note: *p<0.05, ** p<0.01, *** p<0,001. IESA: Emotional Intelligence - Self-Awareness, EISM: Emotional Intelligence - Self-Motivation, EISC: Emotional Intelligence - Self-Control, EIEMP: Emotional Intelligence - Empathy, EISOC: Emotional Intelligence - Sociability, BC PD: Barrier Coping - Planning and Development, BC RD: Barrier Coping - Racial Discrimination, BC JI: Barrier Coping - Job Inadequacy, BC DO: Barrier Coping - Disapproval of Others, BC FP: Barrier Coping - Family Planning, BC SD: Barrier Coping - Sex Discrimination.

2.5. Discussion

Emotional intelligence does not significantly predict barrier likelihood but barrier coping. This possibly indicates that barrier likelihood perception may be unrelated to personal variables, being contextually present regardless of women's emotional intelligence. However, emotional intelligence affects how much women consider themselves capable of coping with these barriers. Such finding corroborates with previous studies which indicate emotional intelligence as one of the main factors for overcoming limits and frustrations in organizational settings (SILVA et al., 2017; MARQUES, 2011).

Emotional intelligence factors also predicted barrier coping, as highlighted in regression results. The only EI factor that show only one significant result regarding barrier coping was Empathy. Such evidence may be a reflection of the corporate and educational STEM environments in which these women are, permeated by gender stereotypes and discrimination (HAERTEL; CARVALHO, 2017). Furthermore, WILKINS-YEL, et al. (2022) warn of the hegemonic stereotype of STEM workers, who are mostly white, heterosexual and upper-class men, hindering the development of female empathy in the workplace.

Considering barrier coping factors, inadequacy at work presented the lowest mean in comparison to the other factors, suggesting that these women find it hard to cope with belonging barriers, common in STEM environments. These results corroborate previous studies which indicate that from a very early age, women face barriers when pursuing careers in STEM fields, presenting low expectations about their competencies (BURKE; MATTIS, 2007; LENT et. al, 2013; SERPA, 2010). Usually, levels of inadequacy at work are linked to low levels of self-efficacy and may be affecting women's perseverance in their careers (NUNES, 2008).

According to the Social Cognitive Career Theory (SCCT), self-efficacy is a primary element in women's continuation or withdrawal from predominantly male careers, revealing practices that reinforce inequality within organizations (BURKE; MATTIS, 2007). Therefore, excessive barriers may lead to discouragement, which would contribute to low persistence in professional goals. Additionally, there is still a slow progress in closing existing gender gaps in the labor market, which shows the need to pay attention to the possible obstacles that are causing them (CADENA, 2020).

One of the EI factors that proved to be most important was self-motivation, which presented the highest mean, besides correlating with all the barrier coping factors. Self-motivation matters because it is related to the determination to achieve a certain goal and to remain persistent even in the face of setbacks (GOLEMAN, 2007). Therefore, self-motivation may be critical for these women, as it allows them to keep going and persevere despite the encountered obstacles. This is reinforced by the SCCT, which suggests personal factors as influencers of professional choice, affecting perseverance and perceived ability (LENT et al, 2013). Further evidence on SCCT also shows that perceived self-efficacy is a determinant in decisions that will sustain a career despite the challenges encountered (KANG; KAUR, 2020). Finally, self-confidence and the ability to make decisions are cognitive attributes that can relate to the motivation and ability of women to continue investing in their careers (KANG; KAUR, 2020).

It is important to remember that self-motivation is linked to the personal pleasure experienced in performing some activity. However, contextual stimuli and facts that provoke negative emotions, such as barriers, can interfere in the effort to focus on goals (BRANCO, 2004). Self-motivation ratings are important and meet the increase in studies involving motivational strategies for women to develop STEM careers (SASS et al., 2018). However, environmental issues such as the gender-related wage gap and

financial factors also affect self-motivation, as well as lower pay leads (BEZZINA, AZZOPARDI; VELLA, 2013; KIM, 2020; STERLING et al., 2020).

Gender-related pay disparities remain high in STEM professions and one reason for that is that women specialize in STEM fields that pay less, while men specialize in fields that pay more (STERLING et al., 2020). Recent studies also found that employed men have fewer years of education than employed women, indicating that women need to study longer than men to get a job, but are still paid less (DÍAZ, 2021). In addition, only 16.8% of currently working women occupy managerial positions, revealing the difficulty encountered by these women to rise professionally, corroborating previous evidence by Bruschini and Puppin (2004) and Noonan (2017).

Other EI factors with higher means were Self-knowledge and Sociability. The self-knowledge factor presented significant correlations with barrier coping factors associated with career development, such as Planning & development and Family planning. Self-knowledge is important for the realization of career potentialities, since the greater the self-awareness, the greater the chances of identification with the chosen career (DIAS; SOARES, 2009). Regarding Sociability, the higher mean could be linked to being able to organize oneself within groups and solve conflicts, regardless of encountered barriers. Studies corroborate the results as they indicate that in STEM fields, from the early beginning, women must show their capabilities, having to work twice as hard to be recognized and valued, thus requiring high levels of social skills (PERUGINI, 2009; LIMA, 2011).

Sociability also showed important correlations and regression coefficients with the barrier coping factors related to Planning & development, Racial discrimination, Disapproval of others, Family planning and Sex discrimination. Considering the Sociability definition, data indicates that these women perceive the emotional states around them and that other people have a very high degree of importance in their professional lives (TOMAZELA, 2018).

However, the greatest highlight is the correlation between Sociability and Family planning, which includes the conflict between household responsibilities and career. As in the literature, results reveal that the greater the perception of family support, the greater the chances of overcoming career barriers, revealing the ever-present dilemma between personal and professional life (LIMA, 2011; TOMAZELA, 2018). Once again, this evidences the importance of going beyond intrapersonal issues and considering contextual variables when it comes to maintaining women in STEM careers. It is also

important to realize how much the concern for other people's well-being stands out in limiting or expanding possibilities in these women's careers.

As women are historically linked to domestic or caregiving tasks, this leads to horizontal segregation at work because it ends up putting women in charge of non-vital tasks and in not so recognized careers, which undermines their ability to assume social and political leadership roles and actively participating in changes and emergence of new technologies (CADENA, 2020). There is still widespread thinking that women are seen as less committed to their careers because they are inclined toward family responsibilities, which is still a limitation to their career development (KANG; KAUR, 2020).

Thus, the role of the family and other factors in women's lives and career is critical. This is also evidenced by the low mean value for coping with Disapproval from others barrier. In a similar direction, Raelin et al. (2014) stated that perceived support is especially important for women, so that it is considered an incentive to stay in a career. Unfortunately, it seems that women may find it difficult to deal with the non-approval of family members or friends in their professional projects and activities.

3. Conclusions

The present study aimed to investigate the relationships between emotional intelligence, perceived barrier likelihood and barrier coping. The results showed that the higher the emotional intelligence, the greater the chances of women in STEM perceiving themselves as capable of overcoming barriers in their careers. On the other hand, there was no significant relationship between emotional intelligence and perceived barriers, suggesting that career barriers will be present despite women's emotional intelligence. Considering the Brazilian scientific panorama, we notice a scarcity of research related to the barriers faced by underrepresented groups in Work and Organizational Psychology. Regarding the specificities of the female gender, it was evidenced that potentialities are being lost within the organizations and leaderships because they are often based on rooted stereotypes. Moreover, it is noticeable a notorious opposition from organizations that seek emotionally intelligent people, but do not present policies that include women.

We encourage STEM organizations and educational institutions to invest in policies and strategies that may alleviate the barriers encountered by women in

predominantly male careers. It is also necessary to review the paths to academic and professional success in STEM fields, demystifying them and facilitating access to guidance and counseling. Changes in classroom culture are also needed to allow more women to have a realistic perception of their abilities while reducing feelings of inadequacy.

This study had limitations regarding the sample size, which although big enough considering statistical parameters and the naturally scarce population of women in STEM, should be larger in future studies to allow further generalization. Another limitation is the lack of comparison with a sample of predominantly female careers or with a male sample, which could bring different results.

Despite limitations, the present study contributes with evidence to a still underdeveloped field, especially in Latin America and Brazil, which is the carrier of women in STEM. We hope to stimulate further research on which individual and contextual aspects should be encouraged to help women in starting and developing a career in a STEM field, as well as to cope with barriers. A suggestion for future research would be to run case studies with women who managed to reach leadership positions within organizations, and how emotional intelligence helped them.

REFERENCES

BEZZINA, F., AZZOPARDI, R. M.; VELLA, G. Understanding and Assessing the Work Motivations of Employed Women: Insights Into Increasing Female Participation Rates in the Maltese Labor Market. **SAGE Open**, v. 3, n. 3, September, 2013. https://doi.org/10.1177/215824401350298

BOFFI, L. C.; OLIVEIRA-SILVA, L. C. Enfrentando as estatísticas: estratégias para permanência de mulheres em STEM. **Gerais: Revista Interinstitucional de Psicologia**, vol. 14, n. special, p. 1-27, dez., 2021. http://dx.doi.org/10.36298/gerais202114e16922.

BRANCO, M. A. R. V. **Auto-motivação** (1ª ed.). Coimbra: Quarteto Editora, 2004.

BRESCOLL, V. L. Leading with their hearts? How gender stereotypes of emotion lead to biased evaluations of female leaders. **The Leadership Quarterly***,* v. 27, n. 3, p. 415–428, june, 2016. https://doi.org/10.1016/j.leaqua.2016.02.005

BRUSCHINI, C; PUPPIN, A. B. Trabalho de mulheres executivas no Brasil no final do século XX. **Revista Caderno de Pesquisa,** v. 34, n. 121, p. 105-138, jan/abril, 2004.

Avaiable on: <https://publicacoes.fcc.org.br/cp/article/view/491/495>

BURKE, R. J.; MATTIS, M. C. **Women and minorities in science, technology, engineering and mathematics: upping the numbers** (1ª ed.). Cheltenham: Edward Elgar, 2007.

CADENA, M. V. D. Gender job gaps and challenges in the digital economy: Findings from global governance entities. **Cuadernos de Administración**, v.36, n. 67, p. 158-171, May, 2020. https://doi.org/10.25100/cdea.v36i67.8767

DIAS, M. S. L.; SOARES, D. H. P. **Planejamento de Carreira: Uma orientação para estudantes universitários.** São Paulo: Vetor, 2009.

DÍAZ, F. S. Evolución y análisis de la discriminación salarial por género en Chile. **El trimestre económico***,* v*.* 88, n. 349, p. 39-75, jun, 2021. https://doi.org/10.20430/ete.v88i349.984

FRENZEL, J. E. Exploration of the entrepreneurial orientation and trait emotional intelligence in practicing pharmacists. **Journal of the American Pharmacists Association: JAPhA**, v. 60, n. 5, p. 723–728.e2, feb, 2020. https://doi.org/10.1016/j.japh.2020.01.022

FRUTUOSO, D. G. **Barreiras e suporte: evidências de validade de um instrumento integrado de variáveis contextuais de carreira**. Trabalho de Conclusão de Curso (Graduação em Psicologia) - Universidade Federal de Uberlândia, Uberlândia, 2022. https://repositorio.ufu.br/handle/123456789/34580

GOLEMAN, D. **Trabalhando com a Inteligência Emocional**. Rio de Janeiro: Objetiva, 2001.

GOLEMAN, D. **Inteligência emocional: a teoria revolucionária que define o que é ser inteligente** (10ª ed.). Rio de Janeiro: Objetiva, 2007.

HAERTEL, H. B. M.; CARVALHO, R. A. S. Mulheres na ciência: obstáculos à carreira no campo da Administração (Completion of course work). Universidade Federal de Santa Catarina – UFSC, Florianópolis, SC, Brasil, 2007. Retrieved from: https://repositorio.ufsc.br/xmlui/handle/123456789/181662

HENDERSON, H. L. et al. Seeking congruity for communal and agentic goals: a longitudinal examination of US college women's persistence in STEM. **Social Psychology of Education,** v. 25, p. 649–674, May, 2022. https://doi.org/10.1007/s10834-010-9226-z

Instituto Brasileiro de Geografia e Estatística. **Estatísticas de Gênero, indicadores sociais das mulheres no Brasil**. Brasil, 2021. Retrieved from: https://

https://biblioteca.ibge.gov.br/visualizacao/livros/liv101784_informativo.pdf

Instituto Nacional de Estudos e Pesquisas Anísio Teixeira | Inep. **Resumo Técnico: Censo da Educação Superior 2020**. Brasil, 2020. Retrieved from: https://download.inep.gov.br/publicacoes/institucionais/estatisticas_e_indicadores/resumo_tecnico_censo_da_educacao_superior_2020.pdf

International Labor Organization. **World Employment and Social Outlook: Trends 2022**. Brasil, 2022. Retrieved from: https://www.ilo.org/wcmsp5/groups/public/---dgreports/---dcomm/---publ/documents/publication/wcms_834081.pdf

KANG, L. S.; KAUR, G. Personal Cognitive Factors Affecting Career Aspirations of Women Working in Financial Sector in India. **Vision**, v. 24, n. 4, p. 419–430, June, 2020. https://doi.org/10.1177/0972262920931344

KIM, M. S. Concept Mapping of Career Motivation of Women With Higher Education. **Frontiers in Psychology**, v. 11, article 1073, May, 2020. https://doi.org/10.3389/fpsyg.2020.01073

LENT, R. W. et al. Social cognitive predictors of adjustment to engineering majors across gender and race/ethnicity. **Journal of Vocational Behavior**, v. 83, n. 1, p. 22-30, Aug, 2013. https://doi.org/10.1016/j.jvb.2013.02.006

LIMA, L. L. B. **A masculinização da mulher líder no Brasil: quatro estudos sobre estereótipos de gênero e protótipos de liderança**. (Masters dissertation). Fundação Getúlio Vargas – FGV, Rio de Janeiro, RJ, Brasil, 2011. Retrieved from: https://bibliotecadigital.fgv.br/dspace/handle/10438/8633

MAYER, J. D.; SALOVEY, P. What is emotional intelligence? In _____. **Emotional development and emotional intelligence: implications for educators**. New York: Basic Books, 1997, pp. 3-13.

MARQUES, M. F. G. **Concepção de Inteligência Emocional em Contexto Educativo e Profissional: Estudo Sobre uma Universidade Angolana** (Master's thesis). Universidade de Lisboa, Lisboa, Portugal, 2011 Retrieved from: http://repositorio.ul.pt/bitstream/10451/5513/1/ulfpie039790_tm.pdf

NOONAN, R. **Women in STEM: 2017 Update**. Office of the Chief Economist, Economics and Statistics Administration, U.S. Department of Commerce, 2017 Retrieved from: https://files.eric.ed.gov/fulltext/ED590906.pdf

NUNES, M. F. O. Funcionamento e desenvolvimento das crenças de auto-eficácia: Uma revisão. **Revista Brasileira de Orientação Profissional**, v. *9*, n. 1, p. 29-42, jun, 2008. Retrieved from: http://pepsic.bvsalud.org/pdf/rbop/v9n1/v9n1a04.pdf

OLIVEIRA-SILVA, L. C.; PARREIRA, V. A. D. Barreiras e enfrentamentos de mulheres em carreiras predominantemente masculinas. **Revista Estudos Feministas**, v. 30, n. 1, e74161, May, 2022. https://doi.org/10.1590/1806-9584-2022v30n174161

PERUGINI, M. L. L. Nuevas metáforas acerca de las mujeres líderes. **Revista Psicología, Cultura y Sociedad**, v. 9, n. 1, p. 65-80, nov, 2009. Retrieved from: https://dspace.palermo.edu/ojs/index.php/psicodebate/article/view/408/188

PRIETO-RODRIGUEZ, E. et al. A study of factors affecting women's lived experiences in STEM. **Humanities and Social Sciences Communications**, v. 9, n. 1, p. 1-11, April, 2022. https://doi.org/10.1057/s41599-022-01136-1

PICO-SALTOS, R. et al. Research Trends in Career Success: A Bibliometric Review. **Sustainability**, v. 13, n. 9, e4625, April, 2021. https://dx.doi.org/10.3390/su13094625

RAIFF, G. W. The influence of perceived career barriers on college women's career planning. Doctoral dissertation. University Of North Texas. Texas, 2004. Retrieved from:https://digital.library.unt.edu/ark:/67531/metadc4685/m2/1/high_res_d/dissertation.pdf

RAELIN, J. A. et al. The Gendered Effect of Cooperative Education, Contextual Support, and Self-Efficacy on Undergraduate Retention. **Journal of Engineering Education**, v. 103, n. 4, p. 599-624, Oct, 2014. https://doi.org/10.1002/jee.20060

REMA, M. K.; GUPTA, R. Emotional Intelligence and Subjective Well-being among Working Women. **Journal of International Women's Studies**, v. 22, n. 6, p. 55-65, June, 2021. Retrieved from: https://vc.bridgew.edu/jiws/vol22/iss6/7

SASS, C. et al. Um relato sobre estratégias de motivação e ensino de lógica de programação para e por mulheres. **VII Congresso Brasileiro de Informática na Educação.** Florianópolis, SC, Brasil, 2018. Retrieved from http://www.en.wwc2017.eventos.dype.com.br/resources/anais/1503888934_ARQUIVO_TrabalhoAdrianaPontesPaiva.pdf

SCHMADER, T. (2022). Gender Inclusion and Fit in STEM. *Annual Review of Psychology*, 74, p. 219- 243, Aug, 2022. https://doi.org/10.1146/annurev-psych-032720-043052

SCHMADER, T.; SEDIKIDES, C. State authenticity as fit to environment: the implications of social identity for fit, authenticity, and self-segregation. **Personality and Social Psychology Review**, v. 22, *n.* 3, p. 228–59, Oct, 2018. https://doi.org/10.1177/1088868317734080

SERPA, N. C. A inserção e a discriminação da mulher no mercado de trabalho: questão

de gênero. **Anais do Congresso Fazendo Gênero - Diásporas, Diversidades, Deslocamentos**. Florianópolis, SC, Brasil, 2010. Retrieved from: http://www.fazendogenero.ufsc.br/9/resources/anais/1265896752_ARQUIVO_ARTIGOREVISAO.pdf

SILVA, M. F. et al. Inteligência emocional como fator motivacional. **Revista Métodos e Pesquisa em Administração**, v. 2, n. 1, p. 16- 24, 2017. Retrieved from: http://www.periodicos.ufpb.br/ojs/index.php/mepad/article/download/30755/17866

SIQUEIRA, M. M. M.; BARBOSA, N. C.; ALVES, M. T. Construção e validação fatorial de uma medida de inteligência emocional. **Revista Teoria e pesquisa**, v. 15, n. 2, p. 143- 152, May – Aug, 1999. https://doi.org/10.1590/S0102-37721999000200007

SOUZA, T. J. A.; BASTOS, P. R. H. O. A carreira profissional e o mercado de trabalho na questão de gênero. **Revista Caderno Espaço Feminino**, v. 25, n. 1, p. 6-16, june, 2012. Retrieved from: http://www.seer.ufu.br/index.php/neguem/article/download/7330/11075

STERLING, A. D. et al. The Confidence GAP predicts the gender pay gap among STEM graduates. **Proceedings of the National Academy of Sciences**, v. 117, n. 48, p. 30303-30308, nov, 2020. https://doi.org/10.1073/pnas.2010269117

SWANSON, J. L.; DANIELS, K. K.; TOKAR, D. M. Assessing perceptions of career-related barriers: The Career Barriers Inventory. **Journal of Career Assessment**, v. 4, n. 2, p. 219–244, march, 1996. https://doi.org/10.1177/106907279600400207

TOMAZELA, C. V. **Relatos sobre inteligência emocional por mulheres líderes.** (Master's thesis). Universidade Católica de Brasília, Brasília, DF, Brasil, 2018. Retrieved from: https://bdtd.ucb.br:8443/jspui/handle/tede/2545

United Nations Educational, Scientific and Cultural Organization. **Decifrar o código: educação de meninas e mulheres em ciências, tecnologia, engenharia e matemática (STEM).** Brasil, 2018. Retrieved from: https://unesdoc.unesco.org/ark:/48223/pf0000264691

United Nations Educational, Scientific and Cultural Organization. **Mapeamento de iniciativas de estímulo de meninas e jovens à área de STEM no Brasil.** Brasil, 2019. Retrieved from: https://unesdoc.unesco.org/ark:/48223/pf0000380903

VASHISHT, S.; KAUSHAL, P.; VASHISHT, R. Emotional intelligence, Personality Variables and Career Adaptability: A Systematic Review and Meta-analysis. **Vision**, p. 1-13, march, 2021. https://doi.org/10.1177/0972262921989877

WIESELMANN, J. R.; ROEHRIG, G. H.; KIM, J. N. Who succeeds in STEM?

Elementary girls' attitudes and beliefs about self and STEM. **School Science and Mathematics**, v.120, n. 5, p. 297-308, May, 2020. https://doi.org/10.1111/ssm.12407

WIJAYATI, D. T., KAUTSAR, A., & KARWANTO, K. Emotional Intelligence, Work-Family Conflict, and Job Satisfaction on Junior High School Teacher's Performance. **International Journal of Higher Education**, v. 9, n. 1, p. 179-188, Jan, 2020. https://doi.org/10.5430/ijhe.v9n1p179

WILKINS-YEL, K. G. et al. "I can't push off my own Mental Health": Chilly STEM climates, mental health, and STEM persistence among Black, Latina, and White graduate women. **Sex Roles**, v. 86, p. 208–232, Jan, 2022. https://doi.org/10.1007/s11199-021-01262-1

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