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A QUANTITATIVE STUDY ON WORKPLACE ANXIETY AMONG MALE AND FEMALE EMPLOYEES IN THE MANUFACTURING SECTOR

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ABSTRACT:

This study investigates workplace anxiety among male and female white-collar employees in the manufacturing sector, addressing a notable gap in existing literature. A quantitative analysis of 103 employees (49 females and 54 males) using a standardized job anxiety scale reveals significant differences in anxiety levels, with males reporting higher scores (mean = 112) compared to females (mean = 59.2) (Mann-Whitney U test: ($r = 0.963$, $p < .001$)). Additionally, the Spearman correlation analysis identifies social anxiety as the most significant contributor to overall workplace anxiety, followed by cognitions of insufficiency, health anxiety and work-related worries. These findings highlight the need for gender-sensitive interventions to foster mental well-being in the workplace. By promoting supportive environments and implementing targeted mental health strategies, organizations can enhance employee well-being and productivity.

INTRODUCTION:

In the modern workplace, anxiety has emerged as a significant concern that has negative impacts on both the personnel, and the organization. Despite the several studies undertaken on workplace stress, there remains a notable gap in understanding the nuanced experiences of anxiety through a gender lens, particularly within specific industry contexts. This study aims to examine workplace anxiety among male and female white-collar employees in the manufacturing sector.

Workplace anxiety is characterized by the employee's worries and tension, which is related to their assigned tasks from the organization and can have a profound impact on both individual and organizational levels. Some recent studies suggest that gender plays a cruicial role in shaping the experience of workplace stress and anxiety. However, the gender influence on workplace anxiety among white collar employees in manufacturing settings is still underexplored.

This research addresses significant literature gaps by focusing on office workers in the manufacturing sector. Most of the other studies are based on the office workers or white collars in service or other industries. The findings of the study can be used for promoting evidence based strategies for addressing the workplace anxiety while giving importance to the gender equity for white collar workforce in the manufacturing industry.

By recognizing the unique challenges faced by different genders in office roles, employers can develop tailored interventions and create supportive environments that prioritize the psychological health and overall well-being of their diverse administrative and managerial staff. Ultimately, this research seeks to contribute to the broader understanding of gendered experiences in white-collar roles within the manufacturing sector. It aims to provide actionable insights for fostering more inclusive, supportive, and mentally healthy work environments for office employees in manufacturing, bridging the gap between traditional industry practices and modern workplace mental health concerns.

REVIEW OF LITERATURE:

Workplace anxiety is an emerging issue, especially in manufacturing and other sectors, where the nature of the job itself raises the possibility of developing mental health issues. Roy and Bhanu (2021) discuss the association of health anxiety with workplace anxiety, targeting the capability of occupational risk factors to magnify symptoms of anxiety disorders among workers in the manufacturing industry. They have been emphasizing the fact that the state of work is the determining condition of the psycho-effective well-being of the worker along with paying special attention to the job activities themselves, as well as to environmental factors. Plaisier et al. (2008; 2013) discuss the role of working conditions as well as social support in the onset of depression and anxiety in employees at work: specifically, male and female employees. Using data from a nationally representative sample of the Dutch population, they conclude that employees with inadequate social support have higher rates of anxiety, thus underlining the importance of promoting supportive

conditions at work. Also, as reported by Plaisier et al. (2008) work-family conflict and psychological distress have been studied in combination. There is a big quantity of work-family conflict, and this will increase the vulnerability for anxiety and depression, thereby reducing overall productivity.

Newbury-Birch and Kamali (2001) concentrate their focus on psychological stressors in the workplace, as evident in demanding jobs, like those found in manufacturing. For this reason, this paper sets down the fact that high levels of stress and anxiety prevail within an environment challenging to undertake any sort of manufacturing work. As such, their research manifested the fact that manufacturing work nature itself was the reason for significant mental health problems. Such understanding requires effective interventions. The prevalence of anxiety and depression in the workplace is studied by Andrea et al. (2021) by focusing on highly stress-sensitive industries and debating the psychosocial work aspects, their quality of demands and control characteristics. They end the study concluding that manifestations of work-related anxiety are usually accompanied by job strain and negative mental health implications. Cherry (1999) follows a longitudinal approach about stress, anxiety, and depression while examining manufacturing, as well as other settings for work. Her study actually indicates that continuity in exposure to work-related stressors is what develops the anxiety problem, serious implications for the health and satisfaction of employees at work.

The most important cause of workplace anxiety is job insecurity, experienced significantly in the manufacturing sector. Boya et al. (2008) discuss several effects of perceived job insecurity on the level of anxiety and depression in nurses indicating female staff to be more susceptible to job insecurity. The same insight can be applied to manufacturing sectors whereby job security is a common issue. Even further, Sanne et al. (2004) examine occupational differences in anxiety and depression, with a result of the study showing that in high-anxiety occupations, both male and female workers reported higher anxiety levels. They also suggest that anxiety is even more prevalent among caregiving women when working in a manufacturing support role, as this role has expectations attached to it.

Gender differences greatly impact the way anxiety is portrayed in relation to the manufacturing industry and the workplace. For example, a publication by Magee (2011) attempted to establish the link that exists between anxiety, demoralization, and job satisfaction; it was found that women experience higher levels of anxiety primarily due to societal expectations created around their roles both within the workplace and at home. Similarly, Patel et al. (2016) discusses how an occupation causes stress and anxiety among Indian women, culminating in the notion that occupational expectations and duties lead to elevated anxiety for women in manufacturing careers. Hardin et al. (2006) discussed anxiety in the career exploration stage, where they found that women have higher anxiety levels than men when there has been a career change within the manufacturing industry and is highly attributed to societal pressures from combining work and family responsibilities.

Battams et al. (2014) conduct a systematic review on workplace risk factors for anxiety and depression with an emphasis on male-dominated occupations such as manufacturing. Based on their findings, while men are more influenced by job pressures, women bear more stresses in terms of family and other care giving responsibilities that enhance their mental health problems. Husain et al. (2016) examine the mediating role of anxiety and depression in job strain and turnover intentions among male and female employees, indicating that women tend to experience higher levels of anxiety, particularly related to job security and work-life balance, which is also pertinent to the manufacturing sector.

The workplace culture itself plays a very big role in shaping the experiences of anxiety in the manufacturing industries. In a discussion on whether workaholic employees who are engaged are protected against experiencing job-related negative affect and anxiety, Spagnoli et al. (2020) further note that gender moderates these effects. According to the research, while the engaged men would be experiencing much lesser anxiety, women in manufacturing industries often experience increased emotional demands leading to relatively higher levels of anxiety. Allam (2014) investigates job anxiety, organizational commitment, and job satisfaction among supervisors in the manufacturing sector, revealing that supervisors experience significant anxiety related to their roles, affecting their organizational commitment, with women supervisors facing unique challenges that exacerbate anxiety.

RESEARCH QUESTIONS:

1. What are the overall anxiety levels of male and female employees in the manufacturing sector?
2. Which dimension contributes most significantly to workplace anxiety among employees?
3. Is there a significant difference in anxiety levels between male and female employees in the manufacturing sector?

AIM OF THE RESEARCH:

The aim of this study is to investigate the anxiety levels of male and female employees in the manufacturing sectors of Kerala. The study also aims to identify the various dimensions contributing to workplace anxiety. By doing so, the research can provide valuable insights that can be used to promote gender-sensitive interventions, thereby enhancing employee mental well-being and improving workplace culture.

RESEARCH OBJECTIVES:

1. To understand the overall anxiety levels of male and female employees in the manufacturing sector.
2. To understand which dimension is more contributing to the workplace anxiety.
3. To understand if there is a significant difference between the anxiety level of male and female employees.

HYPOTHESES:

- There is a significant difference between the anxiety level of male and female employees.
- The health anxiety dimension is the most significant contributor to workplace anxiety.

RESEARCH METHODOLOGY:

- **Population:** Employees from manufacturing industries.
- **Sample:** 103 employees which consists of 49 female and 54 male employees.
- **Type of Research:** Quantitative research.
- **Sampling Technique:** Convenience sampling method.
- **Data Collection Tool:** Standardized job anxiety scale by Beate Muschalla and Michael Linden which consist of total 53 items to measure workplace anxiety levels.

Inclusion Criteria:

1. Participants must hold white-collar positions (e.g., administrative, managerial, technical roles within the manufacturing sector).
2. Only male and female employees will be included.
3. Participants from Kerala.

Exclusion Criteria:

1. Retired or otherwise unemployed participants.
2. Participants below 18 years of age.

RESULTS AND DISCUSSIONS:

Table: 1

Socio-demographic data of the participants

Category	Subcategory	Count
Gender	Male	54
	Female	49
Experience	Less than 1 year	8
	1-2 years	34
	3-5 years	52
	6-10 years	9
Age	22-26	26
	27-31	48
	32-36	20
	37-45	9

The sample consists of 103 participants, with 54 males and 49 females. Regarding work experience, most participants (52) have 3-5 years of experience, followed by 34 with 1-2 years, 9 with 6-10 years, and 8 with less than 1 year. When coming to the age category, the largest group is 27-31 years (48 participants), followed by 22-26 years (26 participants), 32-36 years (20 participants), and 37-45 years (9 participants). This distribution shows a predominantly young workforce with varied levels of experience.

Table: 2

Descriptive for the overall anxiety level of the participants

	Sum of WPA score
N	103
Missing	3
Mean	87.0
Median	61
Sum	8966
Standard deviation	51.9
IQR	77.0

Minimum	24
Maximum	196

The study included 103 participants with a total of 8966 in summed anxiety scores across the sample, with three participants' scores missing. The mean anxiety score was 87.0, while the median was 61, indicating that the data may be right-skewed, with some participants exhibiting higher anxiety scores than others. The anxiety scores ranged from a minimum of 24 to a maximum of 196, reflecting substantial variability within the sample, as supported by a standard deviation of 51.9. The interquartile range (IQR) was 77.0, capturing the spread of the middle 50% of scores and underscoring the diversity in reported anxiety levels. These findings suggest a broad spectrum of workplace anxiety among participants, warranting further exploration into contributing factors and differences by demographic characteristics.

The study assessed the normality of the data distribution and found that it did not follow a normal distribution curve. Consequently, the **Mann-Whitney U test** and **Spearman correlation** were used to test the hypotheses.

H1: There is a significant difference between the anxiety level of male and female employees.

Table: 3

Group Descriptives

	Group	N	Mean	Median	SD	SE
WPA	**Female**	49	59.2	56.0	19.7	2.82
	Male	54	112	123	58.9	8.02

The data shows a notable difference in workplace anxiety levels between genders. Female employees, N = 49 recorded a mean of 59.2 with a standard deviation of 19.7, indicating that their anxiety is relatively lower. Compared with this, male employees, N = 54 have a much higher mean score of 112 and a higher standard deviation of 58.9, which suggests that the anxiety in them is relatively much higher and more varied.

Table: 4

Mann-Whitney U Test

	Statistic	df	p	Mean difference	SE difference		Effect Size
Mann-Whitney U	797		<.001	-59.0		Rank biserial correlation	0.398

The Mann-Whitney U test was used to compare the anxiety scores of male and female employees since the data was not normally distributed. The test reveals that there is a significant difference between the workplace anxiety scores of female and male employees ($U = 797$, $p < .001$). Males had significantly higher workplace anxiety than females, with a mean difference of 59 points. The effect size (rank biserial correlation = 0.398) indicates a moderate difference between the two groups. Since there is a significant difference between the anxiety level of female and male employees we accept the H1 and reject the null hypothesis.

H2: The health anxiety dimension is the most significant contributor to workplace anxiety.

Table: 5

Correlation Matrix

		Sum of WPA score	Sum of social anxiety dimension	Sum of health related anxieties dimension	Sum of cognitions of insufficiency dimension	Sum of work related worries dimension
Sum of WPA score	**Spearman's rho**	—				
	Df	—				

	p-value	—				
Sum of social anxiety dimension	**Spearman's rho**	0.963***	—			
	Df	101	—			
	p-value	<.001	—			
Sum of health related anxieties dimension	**Spearman's rho**	0.919***	0.873***	—		
	Df	101	101	—		
	p-value	<.001	<.001	—		
Sum of cognitions of insufficiency dimension	**Spearman's rho**	0.956***	0.900***	0.867***	—	
	Df	101	101	101	—	
	p-value	<.001	<.001	<.001	—	
Sum of work related worries dimension	**Spearman's rho**	0.888***	0.822***	0.810***	0.833***	—
	Df	101	101	101	101	—
	p-value	<.001	<.001	<.001	<.001	—

Note. * p < .05, ** p < .01, *** p < .001

The Spearman's correlation matrix reveals that there is strong positive correlation among various dimensions of workplace anxiety. Specifically the workplace anxiety score is highly correlated with the social anxiety dimension (r = 0.963, p < .001), suggesting that as social anxiety increases, overall workplace anxiety tends to rise significantly. This is closely followed by the Sum of cognitions of insufficiency dimension (Spearman's rho = 0.956, p < .001), which also shows a significant association. The Sum of health-related anxieties dimension ranks next (Spearman's rho = 0.919, p < .001), demonstrating a notable correlation with the workplace anxiety score. Lastly, the Sum of work-related worries dimension shows the lowest correlation (Spearman's rho = 0.888, p < .001), yet still reveals a strong relationship with overall workplace anxiety. Here it reveals that social anxiety is the most significant contributor to the workplace anxiety which consequently falsifies H2.

DISCUSSION:

This study's findings shows clear gender gaps in workplace anxiety (WPA) among office workers in manufacturing sector. Male employees reported much higher anxiety levels than female employees. This finding aligns with research by Thompson et al. (2019), whose work points out how society's expectations and old-fashioned gender roles make men more anxious. This happens because of stress about job performance and stigma around mental health. These pressures often stop men from getting help or showing when they're struggling, which leads to more anxiety.

The results show that men working in the manufacturing sector have higher levels of WPA, which aligns with other studies that talk about anxiety in industries where men make up most of the workforce. However, research in other fields paints a different picture, often finding that women report feeling more anxious because of pressures at work. For example, studies by Boya et al. (2008) and Patel et al. (2016) have found that women in healthcare jobs feel more WPA. This happens because they worry more about keeping their jobs and face social expectations about balancing work and home life.

When looking at specific factors that lead to workplace anxiety, this study discovered that the "social anxiety" aspect had the biggest impact. This went against our initial hypothesis (H2) that health anxiety would be the main factor. While the results show that social anxiety has a strong influence research by Roy and Bhanu (2021) points out that health-related worries often play the biggest role in causing WPA in manufacturing. This is because of job risks and workplace conditions. In the same way, Andrea et al. (2021) found that job stress and mental health effects from physical and mental demands cause WPA the most. This suggests that health anxiety, work-related concerns, and cognition of insufficiency might have a bigger effect in certain situations.

Further challenging the study's results, Plaisier et al. (2008; 2013) found that support from coworkers in the workplace has an impact on anxiety levels. Less support leads to more workplace anxiety. This research indicates that the amount of support from coworkers matters a lot to both men and women employees. It doesn't depend on gender. Creating supportive work environments might help reduce anxiety in manufacturing industries.

To wrap up, this study shows that social anxiety plays a crucial role in WPA among male white collar employees in manufacturing sector. Yet, a wide range of other studies suggest that different elements—like health anxiety and work related worries—might have an equal impact on workplace setting and demographics. These diverse results highlight the need to develop more specific, industry-focused mental health programs and for companies to use approaches that consider the different mental health issues male and female workers face in manufacturing sector. Creating custom supportive environments can boost well-being and help build a more welcoming workplace culture.

IMPLICATIONS OF THE STUDY:

The findings of this study have several implications for organizations within the manufacturing sector. Firstly, they highlight the necessity for evidence-based strategies aimed at reducing workplace anxiety. Employers should consider implementing mental health programs that are gender-sensitive, recognizing the unique pressures faced by male and female employees.

Apart from these, facilitating an open workplace culture that may help de-stigmatize mental anxiety by encouraging employees to disclose it openly can be the goal. Organizations could also work on providing counselling services and stress management workshops that could directly address dimensions of workplace anxiety.

An open and enabling work environment can actually improve the well-being of the employees, enhancing productivity and job satisfaction, through which organizations can achieve these objectives.

LIMITATIONS OF THE STUDY:

This study presents some limitations that may influence the interpretation of the results. With a sample size of 103 employees, generalization of results may be limited. A larger sample size would strengthen the robustness of data and enhance the reliability of conclusions.

The cross-sectional nature of the study would capture a snapshot of workplace anxiety at one point in time. In doing this, the cross-sectional design of the study restricts any ability to make inferences about causality or observe changes occurring in anxiety levels over time. It would be impossible to understand the trajectory of anxiety at work.

Then, the focus on white-collar employees in the manufacturing sector may limit the applicability of the findings to other industries or job types, as variations in workplace culture and job demands can influence anxiety levels differently across industries.

Thus, it becomes obvious that the levels of anxiety relied on self-reported measures, which may lead to a response bias since employees may have a tendency of reporting lesser or greater anxiety levels than their actual occurrences in order to minimize stigma attached to mental health issues or enhance social desirability.

SCOPE OF THE STUDY:

Despite these limitations, the study contributes significantly to the understanding of workplace anxiety, particularly in the manufacturing sector, where research is relatively scarce. Existing literature primarily focuses on workplace anxiety in service and other industries, highlighting a notable gap in the exploration of this issue within manufacturing environments. This study’s findings can serve as a foundation for future research aimed at investigating workplace anxiety in the manufacturing sector and underscore the importance of addressing mental health challenges specific to this context. Such research can help the organization develop targeted interventions for male and female employees in manufacturing to foster mental well-being and maximize overall employee satisfaction through illumination of distinct factors contributing to workplace anxiety among males and females.

CONCLUSION:

In conclusion, this study provides valuable insights into gender differences in workplace anxiety among employees in the manufacturing sector. The findings indicate that male employees experience significantly higher anxiety levels compared to female employees. This disparity is related to factors such as fear of job security and social anxiety, which contribute to overall workplace anxiety. The identified dimensions of anxiety; particularly social anxiety, and cognitions of insufficiency; underscore the complexity of workplace mental health issues.

Organizations are encouraged to implement evidence-based strategies that promote mental well-being, including gender-sensitive mental health programs and supportive workplace cultures. By addressing the unique challenges faced by different genders, companies can foster a more inclusive and psychologically healthy work environment, ultimately enhancing employee well-being and organizational productivity. Future studies could explore other determinants of anxiety in the workplace and cross-validate these findings among a variety of industrial settings with the ultimate purpose of developing interventions that are targeted towards a wide range of mental health needs and issues.

REFERENCES:

1. Allam, Z. (2013). Job anxiety, organizational commitment and job satisfaction: An empirical assessment of supervisors in the state of Eritrea. *International Journal of Development and Management Review*, *8*(1), 50-62.
2. Andrea, H., Bültmann, U., van Amelsvoort, L. G., & Kant, Y. (2009). The incidence of anxiety and depression among employees—the role of psychosocial work characteristics. *Depression and anxiety*, *26*(11), 1040-1048.
3. Barnay, T., & Defebvre, É. (2019). Gender differences in the influence of mental health on job retention. *Labour*, *33*(4), 507-532.
4. Battams, S., Roche, A. M., Fischer, J. A., Lee, N. K., Cameron, J., & Kostadinov, V. (2014). Workplace risk factors for anxiety and depression in male-dominated industries: a systematic review. *Health Psychology and Behavioral Medicine: an Open Access Journal*, *2*(1), 983-1008.
5. Boya, F. Ö., Demiral, Y., Ergör, A., AKVARDAR, Y., & De Witte, H. (2008). Effects of perceived job insecurity on perceived anxiety and depression in nurses. *Industrial health*, *46*(6), 613-619.
6. Cherry, N. (1978). Stress, anxiety and work: A longitudinal study. *Journal of occupational psychology*, *51*(3), 259-270.
7. Hardin, E. E., Varghese, F. P., Tran, U. V., & Carlson, A. Z. (2006). Anxiety and career exploration: Gender differences in the role of self-construal. *Journal of Vocational Behavior*, *69*(2), 346-358.
8. Husain, W., Gulzar, A., & Aqeel, M. (2016). The mediating role of depression, anxiety and stress between job strain and turnover intentions among male and female teachers. *FWU Journal of Social Sciences*, *10*(1), 48.
9. Magee, W. (2013). Anxiety, demoralization, and the gender difference in job satisfaction. *Sex roles*, *69*(5), 308-322.
10. Newbury-Birch, D., & Kamali, F. (2001). Psychological stress, anxiety, depression, job satisfaction, and personality characteristics in preregistration house officers. *Postgraduate medical journal*, *77*(904), 109-111.
11. Patel, P. A., Patel, P. P., Khadilkar, A. V., Chiplonkar, S. A., & Patel, A. D. (2017). Impact of occupation on stress and anxiety among Indian women. *Women & health*, *57*(3), 392-401.
12. Plaisier, I., De Bruijn, J. G. M., Smit, J. H., De Graaf, R., Ten Have, M., Beekman, A. T. F., ... & Penninx, B. W. J. H. (2008). Work and family roles and the association with depressive and anxiety disorders: differences between men and women. *Journal of affective disorders*, *105*(1-3), 63-72.
13. Plaisier, I., de Bruijn, J. G., de Graaf, R., ten Have, M., Beekman, A. T., & Penninx, B. W. (2007). The contribution of working conditions and social support to the onset of depressive and anxiety disorders among male and female employees. *Social science & medicine*, *64*(2), 401-410.
14. Roy, S. D., & Bhanu, B. S. (2024). Health Anxiety, Workplace Anxiety, and Gender Difference–A Correlational Study. *International Journal of Indian Psychology*, *12*(2).
15. Sanne, B., Mykletun, A., Dahl, A. A., Moen, B. E., & Tell, G. S. (2003). Occupational differences in levels of anxiety and depression: the Hordaland Health Study. *Journal of occupational and environmental medicine*, *45*(6), 628-638.
16. Spagnoli, P., Balducci, C., Scafuri Kovalchuk, L., Maiorano, F., & Buono, C. (2018). Are engaged workaholics protected against job-related negative affect and anxiety before sleep? A study of the moderating role of gender. *International journal of environmental research and public health*, *15*(9), 1996.