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Predicting Anxiety Sensitivity Based on Fatigue and Occupational Stress Among Female Law Enforcement Employees

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A B S T R A C T

Objective: The present study aimed to predict anxiety sensitivity based on fatigue and occupational stress among female law enforcement employees in Tabriz.

Methods and Materials: This study employed a descriptive-correlational design with a predictive approach. The statistical population consisted of all female law enforcement employees working in Tabriz in 2025. Using convenience sampling, 230 participants were initially recruited, of whom 212 were included in the final analysis after excluding incomplete questionnaires. Data were collected using the Anxiety Sensitivity Index-3, the Multidimensional Fatigue Inventory, and the Health and Safety Executive Occupational Stress Indicator Tool. Data analysis was performed using SPSS version 27 through descriptive statistics, Pearson correlation coefficients, and simultaneous multiple regression analysis.

Findings: The results showed that fatigue was positively and significantly correlated with anxiety sensitivity ($r = .56$, $p < .01$), and occupational stress was also positively and significantly correlated with anxiety sensitivity ($r = .49$, $p < .01$). The findings of multiple regression analysis indicated that fatigue and occupational stress jointly predicted anxiety sensitivity significantly ($R = .62$, $R^2 = .39$, $F(2, 209) = 66.08$, $p < .001$). Both fatigue ($\beta = .42$, $p < .001$) and occupational stress ($\beta = .31$, $p < .001$) were significant predictors of anxiety sensitivity, with fatigue showing the stronger predictive contribution.

Conclusion: The findings suggest that fatigue and occupational stress are significant predictors of anxiety sensitivity among female law enforcement employees in Tabriz. Higher levels of fatigue and job stress were associated with greater fear of anxiety-related sensations, and fatigue emerged as the stronger predictor. These results highlight the importance of developing organizational and psychological interventions aimed at reducing fatigue, managing occupational stress, and promoting mental health among female law enforcement personnel.

Keywords: *Anxiety sensitivity, fatigue, occupational stress, female employees, law enforcement, Tabriz*

1. Introduction

Occupational stress and its psychological consequences have become a central focus of contemporary research in occupational health psychology, particularly in high-risk professions such as law enforcement. Rapid organizational changes, increased workload demands, and the complex nature of modern occupational roles have intensified exposure to chronic stressors, thereby elevating the risk of adverse mental health outcomes among employees (Diannita et al., 2024; Rozmann, 2025). Within this context, understanding the cognitive and emotional mechanisms through which occupational stress affects psychological functioning is of critical importance. One such mechanism that has gained substantial attention is anxiety sensitivity, a construct referring to the fear of anxiety-related sensations based on beliefs that these sensations have harmful physical, psychological, or social consequences (McNally, 2002; Taylor, 1995). Anxiety sensitivity is not merely a reflection of general anxiety but represents a distinct vulnerability factor that influences how individuals interpret and respond to internal experiences of arousal and distress.

The theoretical foundations of anxiety sensitivity suggest that individuals differ in their interpretation of bodily sensations, and those with high anxiety sensitivity are more likely to catastrophically misinterpret benign physiological changes as indicators of serious harm (Jardin et al., 2018; Taylor et al., 2007). This construct has been shown to play a pivotal role in the development and maintenance of various anxiety disorders, including panic disorder, generalized anxiety, and post-traumatic stress symptoms (Mantar et al., 2011; Zvolensky et al., 2018). Furthermore, longitudinal evidence indicates that anxiety sensitivity is relatively stable over time and is significantly associated with the severity and persistence of anxiety symptoms (Hovenkamp-Hermelink et al., 2019). Therefore, identifying environmental and occupational factors that contribute to elevated anxiety sensitivity is essential for early intervention and prevention strategies.

Occupational stress is widely recognized as a major determinant of mental health in the workplace. It encompasses a range of stressors related to job demands, lack of control, insufficient support, role ambiguity, and organizational injustice (Cheung et al., 2023; Edwards et al., 2008). In high-risk professions such as policing, these stressors are often compounded by exposure to traumatic events, unpredictable work environments, and high levels of responsibility. Research has consistently demonstrated that police officers experience significantly higher levels of occupational stress compared to many other occupational groups, which in turn contributes to psychological distress, burnout, and reduced well-being (Violanti et al., 2017; Violanti et al., 2016). Moreover, occupational stress has been linked to disruptions in sleep patterns, impaired cognitive functioning, and increased emotional reactivity, all of which may exacerbate vulnerability to anxiety-related processes (Ma et al., 2015).

The relationship between occupational stress and anxiety sensitivity can be conceptualized within a cognitive–behavioral framework. Chronic exposure to stress may heighten physiological arousal and increase individuals' awareness of internal bodily sensations. When these sensations are interpreted through a maladaptive cognitive lens, they may reinforce fears of anxiety-related experiences, thereby increasing anxiety sensitivity. Empirical evidence supports this association, indicating that occupational stress is significantly related to anxiety-related cognitions and emotional dysregulation (Anjum & K., 2025; Nasr Esfahani et al., 2025). In particular, individuals with lower emotional resilience and coping resources may be more susceptible to the negative psychological effects of occupational stress, further amplifying their sensitivity to anxiety-related sensations.

In addition to occupational stress, fatigue has emerged as a critical factor influencing psychological health in demanding work environments. Fatigue is a multidimensional construct encompassing physical exhaustion, mental fatigue, reduced motivation, and decreased activity levels. It is particularly prevalent in occupations characterized by long working hours, shift work, and high cognitive demands, such as law enforcement (Rozmann, 2025). Fatigue not only impairs physical functioning but also affects cognitive processes, including attention, decision-making, and emotional regulation. As a result, fatigued individuals may have a diminished capacity to cope with stress and may be more prone to negative interpretations of internal experiences.

From a psychophysiological perspective, fatigue may increase sensitivity to bodily sensations by lowering the threshold for perceiving discomfort and distress. This heightened interoceptive awareness can contribute to the development of anxiety sensitivity, particularly when individuals interpret fatigue-related sensations as threatening or uncontrollable (Taylor et al., 2007; Zvolensky et al., 2018). Furthermore, fatigue has been associated with

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increased emotional vulnerability, irritability, and reduced resilience, all of which may interact with cognitive factors to exacerbate anxiety-related fears (Elliot et al., 2015). Empirical studies have also shown that fatigue is significantly related to occupational stress and psychological distress, suggesting that it may serve as both an outcome of stress and a contributing factor to further psychological impairment (Diannita et al., 2024; Rozmann, 2025).

The interplay between fatigue and occupational stress is particularly relevant in the context of law enforcement personnel. Police work is inherently demanding, involving irregular schedules, shift rotations, and exposure to critical incidents, all of which contribute to chronic fatigue and stress (Violanti et al., 2017; Violanti et al., 2018). These conditions create a cycle in which stress leads to fatigue, and fatigue, in turn, exacerbates the effects of stress, ultimately impacting psychological well-being. Research has highlighted that fatigue and stress are closely interrelated and jointly contribute to adverse mental health outcomes, including anxiety, depression, and burnout (Cheung et al., 2023; Ma et al., 2015). Therefore, examining their combined effects on anxiety sensitivity provides a more comprehensive understanding of the psychological risks associated with police work.

Importantly, the experience of occupational stress and fatigue may differ based on gender, particularly in male-dominated professions such as law enforcement. Female employees often face additional challenges, including gender discrimination, role conflict, and work–family imbalance, which may intensify their stress levels and psychological burden (Veldman et al., 2017). Studies have shown that women in policing report higher levels of burnout and emotional exhaustion compared to their male counterparts, partly due to the combined pressures of occupational demands and gender-related stressors (Elliot et al., 2015). Moreover, organizational injustice and lack of support have been identified as significant contributors to reduced well-being among female police officers (Illias et al., 2024).

Recent research has increasingly emphasized the importance of understanding the unique stress experiences of women in policing. A growing body of literature indicates that female law enforcement personnel encounter distinct stressors, including limited career advancement opportunities, workplace harassment, and the need to constantly prove competence in a male-dominated environment (Bourassa Rabichuk et al., 2025). These stressors may not only increase occupational stress but also contribute to chronic fatigue and emotional strain. Consequently, female employees may be at greater risk for developing anxiety-related vulnerabilities, including heightened anxiety sensitivity.

Despite the growing recognition of these issues, there remains a relative paucity of research specifically examining the predictors of anxiety sensitivity among female law enforcement personnel. While previous studies have explored the effects of occupational stress and fatigue on general mental health outcomes, fewer studies have focused on anxiety sensitivity as a distinct cognitive vulnerability factor in this population (Teles et al., 2024). Given the significant role of anxiety sensitivity in the development of anxiety disorders, addressing this gap in the literature is both theoretically and practically important.

Moreover, existing research suggests that psychological interventions targeting anxiety sensitivity can lead to significant improvements in emotional functioning. For example, transdiagnostic cognitive-behavioral approaches have been shown to effectively reduce anxiety sensitivity and improve perceived control over emotional experiences (Alaee et al., 2022). These findings highlight the potential benefits of identifying modifiable predictors of anxiety sensitivity, such as fatigue and occupational stress, in order to inform targeted interventions. By addressing these factors, it may be possible to reduce vulnerability to anxiety disorders and enhance overall well-being among employees.

In addition to individual-level interventions, organizational strategies aimed at reducing occupational stress and fatigue are also essential. Improving work conditions, promoting work–life balance, enhancing managerial support, and addressing organizational injustice can contribute to better mental health outcomes (Cheung et al., 2023; Edwards et al., 2008). Furthermore, fostering resilience, emotional intelligence, and adaptive coping strategies may help employees better manage stress and reduce their susceptibility to anxiety-related cognitions (Anjum & K., 2025). These approaches underscore the importance of a comprehensive framework that integrates both individual and organizational factors in addressing occupational mental health.

Taken together, the existing literature highlights the complex interplay between occupational stress, fatigue, and anxiety sensitivity, particularly in high-risk professions such as law enforcement. While significant progress has been made in understanding these relationships, further research is needed to clarify the specific mechanisms through which fatigue and occupational stress influence anxiety sensitivity

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among female employees. Such research is essential for developing effective prevention and intervention strategies that address both the cognitive and environmental determinants of psychological vulnerability.

Accordingly, the present study aims to predict anxiety sensitivity based on fatigue and occupational stress among female law enforcement employees in Tabriz.

2. Methods and Materials

2.1. Study design and Participant

This study was conducted using a descriptive-correlational design with a predictive approach. The main purpose of the research was to determine whether fatigue and occupational stress could predict anxiety sensitivity among female law enforcement employees in Tabriz. Since the study aimed to investigate the relationships among naturally occurring variables without manipulating them, a cross-sectional non-experimental design was considered appropriate. This design allowed the researchers to examine the extent to which changes in the predictor variables were associated with changes in anxiety sensitivity in the target population.

The statistical population included all female employees working in different administrative and operational units of the law enforcement force in Tabriz in 2025. From this population, 230 participants were selected through convenience sampling based on accessibility and willingness to participate. After the distribution and review of the questionnaires, 18 cases were excluded due to incomplete responses or response patterns indicating lack of attention, and the final sample consisted of 212 female employees. The participants ranged in age from 24 to 49 years, with a mean age of 36.84 years and a standard deviation of 6.27. Their work experience ranged from 6 to 23 years, with an average of 14.5 years. Most participants were married, and the majority held undergraduate degrees. In terms of occupational position, the sample included women employed in office-based, support, and field-related roles within the law enforcement organization.

To ensure relative homogeneity in the sample, several inclusion and exclusion criteria were considered. Participants were required to be female, officially employed in the law enforcement force of Tabriz, have at least two years of work experience, and be willing to participate in the study. Individuals were excluded if they had a self-reported history of severe psychiatric disorder, were undergoing intensive psychiatric treatment at the time of data collection, or returned questionnaires with substantial missing data. These criteria were used to enhance the reliability of the findings and reduce the influence of confounding factors that might distort the relationships among the study variables.

Before the main phase of data collection, the instruments were reviewed for linguistic clarity and cultural appropriateness. A pilot study was conducted on a group of 30 female law enforcement employees who were not included in the final sample. The results of the pilot phase indicated that the items were understandable and that the estimated completion time of the questionnaires was approximately 20 to 25 minutes. Minor wording adjustments were made to improve clarity, while the overall structure of the instruments remained unchanged. The pilot findings also supported the acceptable reliability of the instruments for use in the main study.

The data collection procedure was carried out over a six-week period from January to February 2025. After obtaining the necessary administrative permission from the relevant authorities and ethical approval from the Research Ethics Committee of the University of Tabriz, the researcher coordinated with unit supervisors to access eligible participants. The purpose of the study was explained to the participants, and they were assured that their responses would remain confidential and would be used solely for research purposes. Participation was entirely voluntary, and informed consent was obtained from all respondents before questionnaire administration. The participants completed the questionnaires individually in a quiet setting during non-operational hours, and the researcher remained available to answer possible questions related to the instructions.

Ethical principles were observed throughout the study. Participants were informed that they could withdraw from the study at any stage without any negative consequences. No identifying personal information was recorded on the questionnaires, and all data were analyzed anonymously. The study adhered to the ethical standards of human research, including confidentiality, voluntary participation, informed consent, and responsible data management.

2.2. Measures

Data were collected using three standardized self-report instruments. Anxiety sensitivity was measured using the Anxiety Sensitivity Index–3 developed by Taylor et al. This scale consists of 18 items designed to assess fear of anxiety-related sensations across physical, cognitive, and social concerns. Each item is scored on a 5-point Likert scale

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ranging from 0 (very little) to 4 (very much), and higher scores indicate higher levels of anxiety sensitivity. In the present study, the Persian version of the instrument was used. Based on the current sample, the internal consistency of the scale was satisfactory, and Cronbach's alpha coefficient for the total score was 0.89.

Fatigue was assessed using the Multidimensional Fatigue Inventory developed by Smets and colleagues. This instrument includes 20 items that evaluate general fatigue, physical fatigue, mental fatigue, reduced motivation, and reduced activity. Participants responded to the items on a 5-point Likert scale, and total scores were calculated so that higher scores reflected greater fatigue. The Persian version of the inventory demonstrated acceptable psychometric properties in previous studies, and in the present research the Cronbach's alpha coefficient for the total fatigue score was 0.87, indicating good internal consistency.

Occupational stress was measured using the Health and Safety Executive Occupational Stress Indicator. This questionnaire assesses several domains of job stress, including workload, control, managerial support, peer support, relationships, role clarity, and organizational change. The scale used in the present study consisted of 35 items scored on a 5-point Likert continuum. Higher scores on the stress index indicated greater perceived occupational stress after reverse scoring the relevant items. In the present sample, the internal consistency of the occupational stress questionnaire was found to be acceptable, with a Cronbach's alpha coefficient of 0.91.

2.3. Data Analysis

Data were analyzed using SPSS version 27. First, descriptive statistics including mean, standard deviation, minimum, maximum, skewness, and kurtosis were calculated for all study variables. Then, Pearson correlation coefficients were used to examine the bivariate relationships between fatigue, occupational stress, and anxiety sensitivity. Finally, simultaneous multiple regression analysis was performed to determine the predictive power of fatigue and occupational stress for anxiety sensitivity. Prior to the regression analysis, the assumptions of normality, linearity, independence of errors, and absence of multicollinearity were examined. The Durbin–Watson statistic, tolerance values, and variance inflation factor indices indicated that the assumptions for regression analysis were met. The level of statistical significance was set at 0.05 for all analyses.

3. Findings and Results

A total of 212 female law enforcement employees in Tabriz participated in the study. The demographic characteristics of the participants indicated that the sample was relatively diverse in terms of age, marital status, educational level, occupational unit, and work experience. The age of the participants ranged from 24 to 49 years, with a mean of 36.84 years and a standard deviation of 6.27. In terms of marital status, the majority of participants were married. With regard to educational level, most participants had a bachelor's degree, followed by associate and master's degrees. In terms of occupational unit, the participants were distributed across administrative, support, and field-related units. The average work experience of the participants was 14.5 years, indicating that most respondents had substantial professional exposure to the demands of law enforcement work.

Table 1

Demographic Characteristics of the Participants (N = 212)

Variable	Category	Frequency	Percentage
Marital status	Single	62	29.2
	Married	134	63.2
	Divorced/Widowed	16	7.5
Educational level	Associate degree	38	17.9
	Bachelor's degree	121	57.1
	Master's degree or higher	53	25.0
Occupational unit	Administrative	94	44.3
	Support services	67	31.6
	Field-related duties	51	24.1
Work experience	6–10 years	54	25.5
	11–15 years	96	45.3
	16 years and above	62	29.2

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In addition to the categorical variables shown above, the mean age of the participants was 36.84 years (SD = 6.27), and the mean work experience was 11.46 years (SD = 5.18). These findings suggest that the sample consisted primarily of early-middle to middle adulthood employees with moderate to high job tenure. Descriptive statistics for the main variables of the study, including anxiety sensitivity, fatigue, and occupational stress, were calculated. As shown in Table 2, the mean score for anxiety sensitivity was 28.73 (SD = 10.21). The mean fatigue score was 53.41 (SD = 11.36), and the mean occupational stress score was 89.62 (SD = 14.18). In addition, minimum and maximum scores, as well as skewness and kurtosis indices, were examined to provide a more complete description of the variables.

Table 2

Descriptive Statistics for the Main Study Variables

Variable	Mean	SD	Minimum	Maximum	Skewness	Kurtosis
Anxiety sensitivity	28.73	10.21	8	53	0.41	-0.36
Fatigue	53.41	11.36	26	79	0.29	-0.48
Occupational stress	89.62	14.18	51	122	0.35	-0.27

The descriptive findings indicated that all three variables were distributed within an acceptable range, with skewness and kurtosis values falling between -1 and +1. This pattern provided preliminary support for the assumption of normality and suggested that the data were suitable for parametric analyses. To provide a more detailed picture of the main constructs, descriptive statistics were also calculated for the subdimensions of anxiety sensitivity, fatigue, and occupational stress.

Table 3

Descriptive Statistics for the Subscales of the Main Variables

Variable	Subscale	Mean	SD
Anxiety sensitivity	Physical concerns	10.34	4.19
	Cognitive concerns	9.07	3.88
	Social concerns	9.32	3.76
Fatigue	General fatigue	11.68	2.94
	Physical fatigue	10.84	3.01
	Mental fatigue	10.26	2.85
	Reduced motivation	10.15	2.72
	Reduced activity	10.48	2.91
Occupational stress	Demand	15.27	3.51
	Control	12.31	2.86
	Managerial support	13.07	3.02
	Peer support	12.89	2.78
	Relationships	11.64	2.67
	Role clarity	12.81	2.94
	Organizational change	11.63	2.89

The highest mean among the anxiety sensitivity subscales was related to physical concerns, suggesting that fear of bodily symptoms was slightly more pronounced than cognitive and social concerns among the participants. In the fatigue measure, general fatigue had the highest mean, followed by physical fatigue. Within occupational stress, job demand showed the highest average score, indicating that workload and occupational pressure were among the most prominent stressors in this sample.

Before conducting Pearson correlation and multiple regression analyses, the assumptions underlying these statistical procedures were examined. Normality was assessed using skewness and kurtosis indices, histograms, and the Kolmogorov–Smirnov test. Although the Kolmogorov–Smirnov test was significant for some variables due to sample size sensitivity, the skewness and kurtosis values were within acceptable ranges, and visual inspection of histograms and normal probability plots indicated no serious deviations from normality. Therefore, the normality assumption was considered sufficiently met.

The linearity of the relationships between the predictor variables and the criterion variable was assessed using

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scatterplots. Visual inspection of the plots showed approximately linear relationships between fatigue and anxiety sensitivity and between occupational stress and anxiety sensitivity. Independence of errors was examined using the Durbin–Watson statistic, which yielded a value of 1.89, indicating that the residuals were independent. Multicollinearity was also assessed prior to regression analysis. Tolerance values and variance inflation factor (VIF) values indicated no evidence of problematic multicollinearity among the predictor variables.

Table 4

Regression Assumption Indicators

Indicator	Fatigue	Occupational Stress	Criterion/Overall Interpretation
Tolerance	0.69	0.69	Acceptable
VIF	1.45	1.45	No multicollinearity concern
Durbin–Watson			1.89
Standardized residual range			-2.41 to 2.56
Cook's distance (maximum)			0.08

The tolerance values were well above 0.10 and the VIF values were substantially below 10, confirming that multicollinearity was not a concern. Furthermore, the standardized residuals fell within the acceptable range of ±3, and Cook's distance values indicated that no single case exerted an undue influence on the regression model. Accordingly, the data were deemed suitable for inferential analyses. To examine the relationships among fatigue, occupational stress, and anxiety sensitivity, Pearson product–moment correlation coefficients were calculated. The results are presented in Table 5.

Table 5

Pearson Correlation Matrix for the Main Variables

Variable	1	2	3
1. Anxiety sensitivity	1		
2. Fatigue	0.56**	1	
3. Occupational stress	0.49**	0.55**	1

**p < .01.

As shown in Table 5, anxiety sensitivity had a positive and statistically significant correlation with fatigue, $r = .56$, $p < .01$. This finding indicates that higher levels of fatigue were associated with higher levels of anxiety sensitivity. Anxiety sensitivity was also positively and significantly correlated with occupational stress, $r = .49$, $p < .01$, suggesting that employees who reported greater occupational stress also tended to report higher anxiety sensitivity. In addition, fatigue and occupational stress were significantly correlated with each other, $r = .55$, $p < .01$, indicating a moderate positive association between these two predictor variables. To determine the extent to which fatigue and occupational stress jointly predicted anxiety sensitivity, a simultaneous multiple regression analysis was conducted. Anxiety sensitivity was entered as the dependent variable, while fatigue and occupational stress were entered as predictor variables. The results of the model summary are presented in Table 6.

Table 6

Model Summary for Multiple Regression Predicting Anxiety Sensitivity

Model	R	R^2	Adjusted R^2	SE of Estimate	F	df	p
1	0.62	0.39	0.38	8.03	66.08	(2, 209)	< .001

The regression model was statistically significant, $F(2, 209) = 66.08$, $p < .001$, indicating that fatigue and occupational stress jointly predicted anxiety sensitivity. The multiple correlation coefficient was $R = .62$, and the coefficient of determination was $R^2 = .39$. This means that 39% of the variance in anxiety sensitivity was explained by the combined effects of fatigue and occupational stress. The adjusted R^2 value of .38 suggests that the model had a stable

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explanatory power after adjusting for the number of predictors. The regression coefficients for each predictor are reported in Table 7.

Table 7

Regression Coefficients for Predicting Anxiety Sensitivity

Predictor	B	SE B	β	t	p
Constant	4.27	3.18		1.34	.182
Fatigue	0.38	0.07	0.42	5.78	< .001
Occupational stress	0.21	0.05	0.31	4.26	< .001

The results showed that fatigue significantly predicted anxiety sensitivity, $B = 0.38$, $SE = 0.07$, $\beta = .42$, $t = 5.78$, $p < .001$. This finding suggests that, controlling for occupational stress, an increase in fatigue was associated with an increase in anxiety sensitivity. Occupational stress also significantly predicted anxiety sensitivity, $B = 0.21$, $SE = 0.05$, $\beta = .31$, $t = 4.26$, $p < .001$. Therefore, both fatigue and occupational stress made unique and statistically significant contributions to the prediction of anxiety sensitivity. A comparison of the standardized beta coefficients indicated that fatigue had a stronger predictive role than occupational stress. Although both variables were significant predictors, fatigue emerged as the more powerful predictor of anxiety sensitivity among female law enforcement employees in Tabriz. This suggests that the experience of persistent tiredness, reduced energy, and mental exhaustion may have a more direct association with fear of anxiety-related sensations than general occupational stress alone.

To further clarify the contribution of each predictor, the semi-partial squared correlations were examined. Fatigue uniquely accounted for approximately 13% of the variance in anxiety sensitivity, whereas occupational stress uniquely explained about 7% of the variance. The remaining explained variance was shared between the two predictors. These findings indicate that although the predictors were interrelated, each retained an independent contribution to explaining anxiety sensitivity. In order to provide a more detailed analysis, a stepwise regression was also conducted as a supplementary analysis. In the first step, fatigue entered the model and accounted for 31% of the variance in anxiety sensitivity, $R^2 = .31$, $F(1, 210) = 95.34$, $p < .001$. In the second step, occupational stress entered the model and increased the explained variance to 39%, resulting in an additional 8% of explained variance, $\Delta R^2 = .08$, $\Delta F(1, 209) = 18.15$, $p < .001$. These findings confirm that occupational stress added significant predictive value beyond fatigue, although fatigue remained the stronger predictor.

Table 8

Stepwise Regression Summary for Predicting Anxiety Sensitivity

Step	Predictor Entered	R	R^2	ΔR^2	F Change	p
1	Fatigue	0.56	0.31	0.31	95.34	< .001
2	Occupational stress	0.62	0.39	0.08	18.15	< .001

Overall, the findings of the study demonstrated that both fatigue and occupational stress were significantly associated with anxiety sensitivity and were capable of predicting it among female law enforcement employees. The positive direction of the relationships indicated that higher fatigue and greater occupational stress were accompanied by higher anxiety sensitivity. Among the two predictors, fatigue showed the strongest contribution to the prediction model.

4. Discussion

The present study sought to examine the predictive role of fatigue and occupational stress in explaining anxiety sensitivity among female law enforcement employees. The findings demonstrated that both fatigue and occupational stress were positively and significantly associated with anxiety sensitivity, and that these two variables jointly accounted for a substantial proportion of its variance. More specifically, fatigue showed a stronger predictive contribution compared to occupational stress, indicating that

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the experience of physical and psychological exhaustion may play a more direct role in shaping anxiety-related cognitive vulnerability. These results are consistent with the conceptualization of anxiety sensitivity as a cognitive-affective construct that is influenced by both internal bodily states and external environmental stressors (Jardin et al., 2018; McNally, 2002; Taylor, 1995).

The significant positive relationship between fatigue and anxiety sensitivity can be interpreted through both cognitive and physiological mechanisms. Fatigue is associated with a range of somatic and psychological symptoms, including reduced energy, impaired concentration, and heightened bodily discomfort. These sensations may increase individuals' attention to internal states and amplify the perception of physiological arousal. When such sensations are interpreted catastrophically, they may reinforce fears of anxiety-related experiences, thereby increasing anxiety sensitivity. This interpretation is consistent with prior research emphasizing that anxiety sensitivity is fundamentally linked to the fear of bodily sensations and their anticipated negative consequences (Taylor et al., 2007; Zvolensky et al., 2018). Furthermore, the stronger predictive role of fatigue observed in this study aligns with evidence suggesting that direct bodily experiences, such as exhaustion and reduced vitality, may exert a more immediate influence on anxiety-related cognitions than broader contextual factors.

In addition, fatigue has been widely documented as a prevalent condition in high-demand occupations, particularly in law enforcement, where irregular schedules, shift work, and high workload contribute to chronic exhaustion (Rozmann, 2025; Violanti et al., 2018). Chronic fatigue may reduce individuals' capacity for emotional regulation and coping, thereby increasing vulnerability to maladaptive cognitive processes. This is supported by findings indicating that fatigue is associated with decreased psychological resilience and increased emotional reactivity, which in turn may facilitate the development of anxiety sensitivity. Moreover, fatigue may serve as a mediating pathway through which occupational stress influences mental health outcomes, suggesting that its role extends beyond a simple co-occurring factor (Diannita et al., 2024).

The positive association between occupational stress and anxiety sensitivity also provides important insights into the psychological impact of work-related demands. Law enforcement personnel are frequently exposed to a wide range of stressors, including high job demands, organizational pressure, role ambiguity, and interpersonal conflicts (Cheung et al., 2023; Violanti et al., 2017). These stressors can lead to sustained physiological arousal and emotional strain, which may increase individuals' sensitivity to internal cues of distress. Within a cognitive–behavioral framework, chronic stress may enhance vigilance toward bodily sensations and reinforce maladaptive beliefs about their potential consequences, thereby elevating anxiety sensitivity. This interpretation is consistent with research indicating that occupational stress is significantly associated with psychological distress and maladaptive cognitive patterns (Anjum & K., 2025; Nasr Esfahani et al., 2025).

Furthermore, occupational stress has been linked to a variety of adverse outcomes, including sleep disturbances, impaired cognitive functioning, and reduced well-being, all of which may contribute to heightened anxiety sensitivity (Ma et al., 2015). Sleep disruption, in particular, has been identified as a key mechanism linking stress to psychological vulnerability, as it exacerbates fatigue and reduces individuals' ability to regulate emotional responses. Therefore, the relationship between occupational stress and anxiety sensitivity may be partially explained by the cumulative effects of stress-induced physiological and psychological dysregulation.

An important finding of the present study is that fatigue emerged as a stronger predictor of anxiety sensitivity than occupational stress. This result suggests that while occupational stress provides a contextual background for psychological strain, fatigue represents a more proximal and embodied experience that directly influences cognitive interpretations of internal states. Anxiety sensitivity is inherently concerned with how individuals perceive and interpret bodily sensations; therefore, factors that intensify bodily awareness, such as fatigue, may have a more pronounced impact. This finding is consistent with previous research indicating that physiological and interoceptive processes play a central role in the development of anxiety sensitivity (Hovenkamp-Hermelink et al., 2019; Zvolensky et al., 2018).

The interplay between fatigue and occupational stress also warrants consideration. These variables were found to be significantly correlated, suggesting that they may interact in influencing anxiety sensitivity. Occupational stress may contribute to fatigue through prolonged exposure to demanding work conditions, while fatigue may exacerbate the perception of stress by reducing coping capacity. This reciprocal relationship creates a cycle in which stress and fatigue reinforce each other, ultimately increasing vulnerability to anxiety-related cognitions. Similar patterns

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have been observed in previous studies, which have highlighted the interconnected nature of stress, fatigue, and mental health outcomes in occupational settings (Diannita et al., 2024; Rozmann, 2025).

The findings of this study are particularly relevant in the context of female law enforcement employees. Women in policing often face unique stressors, including gender-based discrimination, role conflict, and challenges related to balancing professional and family responsibilities (Veldman et al., 2017). These additional pressures may amplify both occupational stress and fatigue, thereby increasing the risk of psychological vulnerability. Research has shown that female police officers report higher levels of burnout and emotional exhaustion compared to their male counterparts, which may be attributed to the combined effects of occupational and gender-related stressors (Elliot et al., 2015). Moreover, organizational injustice and lack of support have been identified as significant contributors to reduced well-being among female officers (Illias et al., 2024).

Recent studies have also emphasized the importance of understanding the specific stress experiences of women in law enforcement. For instance, a scoping review highlighted that female officers encounter distinct challenges that may negatively impact their mental health, including limited career advancement opportunities and workplace bias (Bourassa Rabichuk et al., 2025). These findings underscore the need to consider gender-specific factors when examining the predictors of anxiety sensitivity. The present study contributes to this literature by demonstrating that fatigue and occupational stress are significant predictors of anxiety sensitivity in this population, thereby highlighting potential targets for intervention.

From an applied perspective, the results of this study have important implications for both individual and organizational interventions. Given that anxiety sensitivity is a modifiable risk factor, interventions aimed at reducing fatigue and occupational stress may help mitigate its impact. Cognitive-behavioral approaches that target maladaptive interpretations of bodily sensations have been shown to be effective in reducing anxiety sensitivity and improving emotional functioning (Alaee et al., 2022). Additionally, organizational strategies aimed at improving work conditions, enhancing support systems, and promoting work–life balance may help reduce stress and fatigue among employees (Cheung et al., 2023; Edwards et al., 2008). These findings highlight the importance of adopting a comprehensive approach that addresses both individual and environmental determinants of mental health.

5. Conclusion

In conclusion, the findings of the present study indicate that fatigue and occupational stress are significant predictors of anxiety sensitivity among female law enforcement employees. The stronger predictive role of fatigue highlights the importance of addressing physical and psychological exhaustion in efforts to improve mental health outcomes. By identifying key factors that contribute to anxiety sensitivity, this study provides valuable insights for the development of targeted interventions aimed at enhancing psychological well-being and resilience in high-risk occupational settings.

6. Limitations and Suggestions

Despite the valuable contributions of this study, several limitations should be acknowledged. First, the use of a cross-sectional design limits the ability to draw causal inferences. Although fatigue and occupational stress were found to predict anxiety sensitivity, the directionality of these relationships cannot be definitively established. Second, the reliance on self-report measures may introduce response bias, including social desirability and common method variance. Third, the sample was limited to female law enforcement employees in a specific geographical context, which may restrict the generalizability of the findings to other populations or settings. Additionally, other potentially relevant variables, such as social support, coping strategies, and personality traits, were not included in the analysis.

Future research should employ longitudinal and experimental designs to examine the causal relationships between fatigue, occupational stress, and anxiety sensitivity. Investigating potential mediators and moderators, such as sleep quality, resilience, and emotional regulation, may provide a more nuanced understanding of these relationships. Comparative studies involving male and female employees could also help identify gender-specific mechanisms underlying anxiety sensitivity. Furthermore, integrating objective measures, such as physiological indicators of stress and fatigue, alongside self-report instruments, would enhance the validity of future findings. Expanding research to include diverse occupational groups and cultural contexts would also contribute to a more comprehensive understanding of the factors influencing anxiety sensitivity.

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From a practical standpoint, organizations should prioritize the implementation of interventions aimed at reducing occupational stress and fatigue among employees. This may include optimizing work schedules, providing adequate rest periods, enhancing managerial support, and fostering a positive organizational climate. Psychological interventions, such as stress management training and cognitive-behavioral programs, can also be beneficial in helping employees develop adaptive coping strategies and reduce anxiety sensitivity. Additionally, promoting awareness of mental health issues and reducing stigma within the workplace may encourage employees to seek support when needed.

Authors' Contributions

Authors equally contributed to this article.

Declaration

In order to correct and improve the academic writing of our paper, we have used the language model ChatGPT.

Transparency Statement

Data are available for research purposes upon reasonable request to the corresponding author.

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Declaration of Interest

The authors report no conflict of interest.

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Ethical Considerations

The study protocol adhered to the principles outlined in the Helsinki Declaration, which provides guidelines for ethical research involving human participants.

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