

DEPRESSION, ANXIETY AND STRESS AMONG FEMALE AND MALE POLICE OFFICERS

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ABSTRACT

Objective: The present study was targeted to measure the differences in the levels of depression, anxiety and stress between female and male police officers of Khyber Pakhtoonkhwa, Pakistan.

Research design: Quasi Experimental Design

Place of Study: Khyber Pakhtoonkhwa, Pakistan

Sample and Method: The sample included 315 police officers from three districts of the province. Depression Anxiety and Stress Scale (DASS) was administered. It was hypothesized that female police officers would have higher levels of depression, anxiety, and stress as compared to male police officers.

Results: Female police officers reported “severe” levels of depression, “extremely severe” levels of anxiety and “severe” levels of stress. Male police officers, on the other hand, projected “moderate” levels of depression, “extremely severe” levels of anxiety and “moderate” levels of stress. The difference between male and female police officers for the scores of depression, anxiety and stress was highly significant.

Conclusion: The study concluded that female police officers had higher levels of depression, anxiety and stress as compared with male police officers.

Keywords: Depression; anxiety; stress; police; males; females

INTRODUCTION

Stress, Anxiety, and Depression are widespread psychological problems of working persons. These are the most commonly diagnosed illnesses in Psychology^{1,2,3}. Much consideration is given to these areas as the prevalence of these syndromes is increasing^{4,5}. Several studies have associated these syndromes to numerous negative outcomes in the workplace, such as decreased performance and satisfaction^{6,7,8}. The outcomes of depression, anxiety and stress are also associated with negative outcomes in other aspects of life, including general satisfaction^{5,9}, quality of life¹⁰, and social interactions^{11,2}. Researchers have

¹ Brown, T., Chorpita, B., Korotitsch, W., & Barlow, D. (1997). Psychometric properties of the Depression Anxiety Stress Scales (DASS) in clinical samples. *Behavior Research and Therapy*, 35, 79-89.

² Davies, F., Norman, R., Cortese, L., & Malla, A. (1995). The relationship between types of anxiety and depression. *The Journal of Nervous and Mental Disease*, 183, 31-35.

³ Farmer, R. (1998). Depressive symptoms as a function of trait anxiety and impulsivity. *Journal of Clinical Psychology*, 54, 129-135.

⁴ Cyranowski, J., Frank, E., Young, E., & Shear, K. (2000). Adolescent onset of the gender difference in lifetime rates of major depression. *Archives of General Psychiatry*, 57, 21-27.

⁵ Kessler, R. C., McGonagle, K. A., Zhao, S., Nelson, C. B., Hughes, M., Eshleman, S., Wittchen, H.-U., & Kendler, K. S. (1994). Lifetime and 12-month prevalence of DSM-III-R psychiatric disorders in the United States: Results from the National Comorbidity Study. *Archives of General Psychiatry*, 51(1), 8-19.

⁶ Cavanaugh, M., Boswell, W., Roehling, M., & Boudreau, J. (2000). An empirical examination of self-reported work stress among U.S. managers. *Journal of Applied Psychology*, 85(1), 65-74.

⁷ Greenberg, J. (1999). *Comprehensive stress management*. Dubuque, IA: WCB McGraw-Hill.

⁸ Seaward, B. (1999). *Managing stress: Principles and strategies for health and well-being*. Sudbury, MA: Jones and Bartlett.

proposed that all populations, and particularly employees, are being affected by the aforesaid disturbances in epidemic proportions. Researchers have suggested that each of these syndromes can be associated with decreased performance on the job, decreased satisfaction in the work environment, and poor interpersonal skills; which contribute to poor customer service, increased intention to leave, and impaired peer relations in the workplace^{12,13}.

Traditionally, it was believed that stress, anxiety and depression were separate constructs with varying etiologies and symptoms; however, the high co-morbidity rates, especially between anxiety and depression, have gained interest and attention throughout the field^{14,15}. Some associations are also developed between stress and depression^{16, 17}. The development of more complex stress models has, however, provided support for a relationship between the syndromes¹⁸.

⁹ Youngren, M., & Lewinsohn, P. (1980). The functional relationship between depression and problematic interpersonal behavior. *Journal of Abnormal Psychology*, 89 (3), 333-341.

¹⁰ Norvell, N., Hills, H., & Murrin, M. (1993). Understanding stress in female and male law enforcement officers. *Psychology of Women Quarterly*, 17, 289-301.

¹¹ Alden, L., & Phillips, N. (1990). An interpersonal analysis of social anxiety and depression. *Cognitive Therapy and Research*, 14(5), 499-513.

¹² Geller, P. & Hobfoll, S. (1994). Gender differences in job stress, tedium and social support in the workplace. *Journal of Social and Personal Relationships*, 11, 555-572.

¹³ Lovibond, P. (1998). Long-term stability of depression, anxiety and stress syndromes. *Journal of Abnormal Psychology*, 107, 520-526.

¹⁴ Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states: Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression and Anxiety Inventories. *Behavior Research and Therapy*, 33, 335-343.

¹⁵ Feldman, L. (1993). Distinguishing depression and anxiety in self-report: Evidence from confirmatory factor analysis on nonclinical and clinical samples. *Journal of Consulting and Clinical Psychology*, 61(4), 631-638.

¹⁶ Hammen, C. L. (1991). The generation of stress in the course of unipolar depression. *Journal of Abnormal Psychology*, 100, 555-561.

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Many theories are proposed to clarify the variations in stress effects between men and women; some of which include: gender socialization and gender roles, tokenism, family status and children, workloads, social support, or self-reported variations. Moreover, environmental and demographic factors of work can also have an important effect on stress such as justice, social capital, work-life balance, traumatic events, age, experience, and race. McCarty and colleagues¹⁹ are of opinion that satisfactory attention is not applied to gender differences within stress and burnout research of police officers. On the other hand, He and collaborators²⁰ examined police officers and did report some gender variations. They claimed three initial findings: firstly female officers had higher levels of stress than males; secondly white males had higher stress levels than black males; and finally there were no significant stress differences between white and black female officers. Violanti and colleagues²¹ studied 105 male and female police officers and reported that depressive symptoms were higher among females than male officers. The study also reported that the levels of depression were higher in married female police officers as compared to unmarried female police officers. The higher prevalence of depression for women officers

¹⁷ Lazarus, R. (1984). Puzzles in the study of daily hassles. *Journal of Behavioral Medicine*, 7(4), 375–389.

¹⁸ Davila, J., Hammen, C., Burge, D., Paley, B., & Daley, S. (1995). Poor interpersonal problem solving as a mechanism of stress generation in depression among adolescent women. *Journal of Abnormal Psychology*, 104(4), 592-600.

¹⁹ McCarty, W. P., Zhao, J. S., & Garland, B. E. (2007). Occupational Stress and Burnout between Male and Female Police Officers. Are there any Gender Differences? *Policing: An International Journal of Police Strategies & Management* 30(4):672-691.

²⁰ He, N., J. Zhao & L. Ren. (2005). Do Race and Gender Matter in Police Stress? A Preliminary Assessment of the Interactive Effects. *Journal of Criminal Justice* 33, 535–547.

²¹ Violanti, J. M., Desta, F., Luenda, E., Charles, M. E., Andrew, T. A., Anna, M., ... Cecil, M. (2008). Suicide in Police Work: Exploring Potential Contributing Influences. *American Journal of Criminal Justice*, 34(1-2), 41-53

compared to male officers in this study is consistent with findings from population studies²².

The current study was designed to measure the differences in the levels of depression, anxiety and stress between female and male police officers of the understudied province of Pakistan. It was hypothesized that female police officers would project higher levels of depression, anxiety and stress as compared to male police officers.

METHOD

Participants

The research involved 315 conveniently selected police officers including female ($n=130$) and male ($n=185$) police officers. The participants belonged to districts of Peshawar, Abbottabad and Mardan of Khyber Pakhtoonkhwa province of Pakistan.

Measures

Depression, Anxiety and Stress Scale (DASS)

The Depression, Anxiety and Stress Scale (DASS)¹⁴ comprises of 42 items. It is a self-report inventory that deals with three different but relevant factors i.e. depression, anxiety, and stress. Each of the three DASS scales contains 14 items, divided into subscales of 2-5 items with similar content. The Depression scale measures dysphoria, hopelessness, devaluation of life, self-deprecation, lack of interest/involvement, anhedonia, and inertia. The Anxiety scale measures autonomic arousal, skeletal muscle effects, situational anxiety, and subjective experience of anxious affect. The Stress scale is sensitive to levels of chronic non-specific arousal. It measures difficulty in relaxing, nervous arousal, and being easily upset/agitated, irritable/over-reactive and impatient. Respondents are asked to use 4-point severity/frequency scales to rate the extent to which they have experienced each state over the past week. Scores for

²² Kessler, R. C., Borges, G., & Walters, E. (1999). Prevalence of and risk factors for lifetime suicide attempts in the National Comorbidity Survey. *Archives of General Psychiatry*, 56, 617–626.

Depression, Anxiety and Stress are calculated by summing the scores for the relevant items. Gamma coefficients that represent the weight of each scale on the overall factor (total score) are .71 for depression, .86 for anxiety, and .88 for stress. Anxiety and stress may weight higher than depression on the common factor as they are more highly correlated and, therefore, dominate the definition of this common factor¹⁴. Reliability of the three scales is considered appropriate and test-retest reliability is similarly considered adequate with .71 for depression, .79 for anxiety and .81 for stress¹. Exploratory and confirmatory factor analyses have sustained the proposition of the three factors ($p < .05$)¹. The DASS anxiety scale correlates .81 with the Beck Anxiety Inventory (BAI), and the DASS Depression scale correlates .74 with the Beck Depression Scale (BDI). The Scoring and Interpretation Index of Depression, Anxiety, and Stress Scale is as under:

Scoring and Interpretation of DASS			
	Depression	Anxiety	Stress
Normal	0 – 9	0 - 7	0 – 14
Mild	10 – 13	8 – 9	15 – 18
Moderate	14 – 20	10 – 14	19 – 25
Severe	21 – 27	15 – 19	26 – 33
Extremely Severe	28+	20+	34 +

Lovibond, S., & Lovibond, P. (1995)

Procedure

After acquiring a written permission from the Inspector General of the Frontier Police Force, the participants of the research were individually approached by the researcher in three districts of the province i.e. Peshawar, Abbottabad and Mardan. The instructions which were already mentioned in the instrument were also made clear to them. The researcher was available for the respondent in case the respondent needed help in translating / understanding difficult words. The subjects and the facilitators were acknowledged for their cooperation.

Scoring and Statistical Analysis

The scores obtained were analyzed using the Statistical Package for Social Sciences (SPSS). t-test was applied to measure the differences in the levels of depression, anxiety and stress between female and male police officers. The results were tabulated as under.

RESULTS

Table 1
Frequencies and Percentages for the female and male police officers

	Frequency	Percent	Valid Percent	Cumulative Percent
Male	185	58.7	58.7	58.7
Female	130	41.3	41.3	100.0
Total	315	100.0	100.0	

Table 2
Descriptive Statistics of the scores of the Female and Male Police Officers on Depression, Anxiety & Stress Scale

	N	Minimum	Maximum	M	SD
Sex	315	1	2	1.41	.49
Depression	315	10.00	39.00	22.00	6.65
Anxiety	315	11.00	37.00	23.33	6.17
Stress	315	11.00	37.00	23.30	6.23

Table 3
Means, standard deviations and t-value of the Depression scores of the Female and Male Police Officers on Depression, Anxiety & Stress Scale

Group	N	M	SD	t-value
Females	130	26.34	5.31	11.57
Males	185	18.95	5.75	

df= 313; p<.001

According to the table above, the mean depression score in Female Police Officers is 26.34 which is interpreted as “Severe Depression” on Depression, Anxiety & Stress Scale. The mean depression score of Male Police Officers is 18.95 which means “Moderate Depression” on Depression, Anxiety & Stress Scale. The above table further shows highly significant difference between the Female and Male Police Officers on Depression, Anxiety & Stress Scale by Depression Scores ($t= 11.57$, $p<.001$). The figures show that Female Police Officers have more depression ($M=26.34$, $SD=5.31$) as compared to Male Police Officers ($M=18.95$, $SD=5.75$).

Table 4
Means, standard deviations and t-value of the Anxiety scores of the Female and Male Police Officers on Depression, Anxiety & Stress Scale

<i>Group</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t-value</i>
Females	130	27.07	4.82	
Males	185	20.70	5.65	10.44

df= 313; $p<.001$

The table above reveals that the mean anxiety score in Female Police Officers is 27.07 which is interpreted as “Extremely Severe Anxiety” on Depression, Anxiety & Stress Scale. The mean anxiety score of Male Police Officers is 20.705 which also means “Extremely Severe Anxiety” on Depression, Anxiety & Stress Scale. The above table further shows highly significant difference between the Female and Male Police Officers on Depression, Anxiety & Stress Scale by Anxiety Scores ($t= 10.44$, $p<.001$). The figures show that Female Police Officers have more anxiety ($M=27.07$, $SD=4.82$) as compared to Male Police Officers ($M=20.70$, $SD=5.65$).

Table 5
Means, standard deviations and t-value of the Stress scores of the Female and Male Police Officers on Depression, Anxiety & Stress Scale

<i>Group</i>	<i>N</i>	<i>M</i>	<i>SD</i>	<i>t-value</i>
Females	130	26.65	5.08	
Males	185	20.95	5.88	8.94

df= 313; $p<.001$

The table above projects that the mean stress score in Female Police Officers is 26.65 which is interpreted as “Severe Stress” on Depression, Anxiety & Stress Scale. The mean stress score of Male Police Officers is 20.95 which means “Moderate Stress” on Depression, Anxiety & Stress Scale. The above table also reveals highly significant difference between the Female and Male Police Officers on Depression, Anxiety & Stress Scale by Stress Scores ($t= 8.94$, $p<.001$). The figures show that Female Police Officers have more stress ($M=26.65$, $SD=5.08$) as compared to Male Police Officers ($M=20.95$, $SD=5.88$).

DISCUSSION

The results of the current study revealed that the police officers reflected moderate and severe levels of depression; extremely severe levels of anxiety; and severe and moderate levels of stress. The results of the current study further revealed that the female police officers projected higher levels of depression, anxiety and stress as compared to male police officers.

Police officers perform jobs that are recognized as suffering from high levels of stress by performing tasks that are both physically and emotionally demanding^{23,24}. Stress in police officers and other law enforcement personnel is an inspiring area for the researchers. Law enforcement is constantly identified as one of the most stressful occupations^{25,26,27}. Police work is generally regarded as a

²³ Kopel, H. & Friedman, M. (1999). Effects of Exposure to Violence in South African Police. In J. Violanti., & D. Paton (Eds.) *Police Trauma: Psychological Aftermath of Civilian Combat*. Springfield: Charles C. Thomas.

²⁴ Stotland, E. (1991). The Effects of Police Work and Professional Relationships on Health. *Journal of Criminal Justice*, 19, 371-379.

²⁵ Burke, R. (1994). Stressful events, work-family conflict, coping, psychological burnout, and wellbeing among police officers. *Psychological Reports*, 75, 787-800.

²⁶ Carlier, I. V., Lamberts, R. D., & Gersons, B. P. (1997). Risk factors for posttraumatic stress symptomology in police officers: a prospective analysis. *Journal of Nervous & Mental Disease*, 185, 498-506.

²⁷ Kirkcaldy, B., Cooper, C., & Ruffalo, P. (1995). Work stress and health in a sample of U.S. police. *Psychological Reports*, 76(2), 700-702.

highly stressful occupation²⁸. Policing is considered as the most psychologically dangerous profession worldwide²⁹. Police officers are frequently exposed to various traumatic situations ranging from threats to themselves and their colleagues, to witnessing riots, injuries or death of citizens, bombings, shootings, criminal activities and often fatal shootings of perpetrators³⁰. They are required to operate in situations of conflict, apprehend violent criminals, and face hostile members of the public and deal with the inevitable political pressures of public life³¹. Studies have linked various stressors of police work to psychological distress, depression, anxiety, alcoholism, burnout, cardiac disorders and suicide; as well as family and marital problems^{32,33,34}.

The previous studies into the gender differences on the effects of stress have found different results ranging from no gender differences³⁵ to higher stress levels in females²⁰. These variations are partially derived from many different methodologies and measuring techniques used across the disciplines who inquire

²⁸ Violante, J. M. (1983). Stress patterns in police work, A longitudinal study. *Journal of Police Science and Administration*, 11, 211-216

²⁹ Axel, B. M. & Valle, J. (1979). South Florida's approach to police stress management, *Police Stress*, 1, 13-14.

³⁰ McCafferty, F. L., Domingo, G. D., & McCafferty, E. A. (1990). Posttraumatic stress disorder in the police officer: paradigm of occupational stress. *Southern Medical Journal*, 83(5), 543-547.

³¹ Violanti, J. M., & Paton, D., (1999). *Police trauma: Psychological aftermath of civilian combat*. Springfield, IL: Charles C. Thomas.

³² Kop, N., Euwema, M., & Schaufeli, W. (1999). Burnout, job stress and violent behaviour among Dutch police officers. *Work Stress*, 13, 326-340.

³³ Loo, R., (1999). Police suicide: The ultimate stress reaction. In J. M. Violanti & D. Paton (Eds.), *Police trauma: Psychological aftermath of civilian combat* (pp. 241-254), Springfield, IL: Charles C. Thomas.

³⁴ Violanti, J. M. (1992). Coping strategies among police recruits in a high-stress training environment. *Journal of Social Psychology*, 132, 717-729.

³⁵ Brown, J., & Campbell, E. (1994). *Stress and Policing: Sources and Strategies*. Chichester: John Wiley & Sons.

into this problem; including economics, industrial relations, management, medicine, social psychology, and sociology. It is, nevertheless, suggested that female officers may face additional stress factors than those experienced by their male colleagues^{36,37}. Desmarais and Alksnis³⁸ suggest three different ways in which the factor of gender varies with relation to occupational stress. Firstly, males and females may experience different stressors or different levels of the same stressor from the same single event. Secondly, the reaction of males and females to the event can vary greatly so that each gender experiences a different level of stress from the event. Finally, the stressor-strain relationship observed for males and females may differ or that gender may act as a moderator such that it affects one gender and not the other. The commonly observed gender differences in physical health and illness suggest that women, on average, live seven years longer than men; men less often report being ill; men are more likely to die of the main causes of death; more men use alcohol and cigarettes; and more women make use of the healthcare system and have problems with their body image and weight control³⁹.

Female officers may still be exposed to supplementary gender specific stressors in being treated differently both by their organization and by male colleagues³⁵. A gender connection is also noted in other occupational groups, with higher levels of reported strain noted in female civil servants in the Whitehall II study⁴⁰. Martin and Jurik⁴¹ are of the view that men are typically

³⁶ Morash, M., & Haarr, R. (1995). Gender, workplace problems, and stress in policing. *Justice Quarterly, 12*(1), 113–140.

³⁷ Stotland, E. (1991). The effects of police work and professional relationships on health. *Journal of Criminal Justice, 19*, 371-379.

³⁸ Desmarais, S. & C. Alksnis. (2005). Gender issues. In J. Barling, E. K. Kelloway, & M. R. Frone (Eds.), *Handbook of Work Stress*. Thousand Oaks: Sage Publications Inc.

³⁹ Wersch, A.V. (2005). Health and illness. In K. Trew & J. Kremer (Eds.), *Gender and Psychology*. London: Arnold.

⁴⁰ Fuhrer, R., Stansfeld, S. A., Chemali, J., & Shipley, M. J. (1999). Gender, social relations and mental health: prospective findings from an occupational cohort (Whitehall II study). *Social Science & Medicine, 48*, 77–87.

⁴¹ Martin, S. E., & Jurik, N. C. (1996). *Doing justice, doing gender: Women in law and criminal justice occupation*. Thousand Oaks, CA: Sage.

accustomed to dominate women and habitually do not regard them as figures of authority while women conversely are not habitual in exercising authority over men. Within the police service, women are often regarded as inadequate officers and are often regarded as a liability in dangerous situations.

The understudied province of Pakistan in general is an area where females are deprived of many fundamental rights. They have more psychosocial pressures as compared to males. Working women face additional psychosocial problems including violence and harassment. Female police officers in the province are not visible on the line of duty and do not work in public, rather they prefer to stay within the police stations. The instruments used in the current study interpret that the female police officers demonstrate "Severe" levels of depression, anxiety and stress as compared to the male police officers who, on the other hand, also demonstrate "Moderate" levels of depression, anxiety and stress.

Implications

The current study provided novel information as no such studies were conducted in the country before. The study would be a valuable support to the Police Department, the policy makers of the Government of Pakistan and the Donor Organizations in understanding the psychosocial factors for the better performance of the police officers. Another beneficial aspect of the study would be for the police officers themselves who would be in a better position to realize their mental health related issues.

Conclusion

The present study was targeted at measuring the differences in the levels of depression, anxiety and stress between female and male police officers of Khyber Pakhtunkhwa province of Pakistan. The study involved 315 police officers from three districts of the understudied province. It was hypothesized that female police officers would have higher levels of depression, anxiety and stress as compared with male police officers. The results supported the hypothesis and it was revealed that female police officers had comparatively higher levels of depression, anxiety and stress. These differences were highly significant and the findings were reliably consistent with earlier studies of similar nature conducted in other parts of the world.