

**Burnout and Development of Psychosomatic Disorders Among Police Personnel: A Case Control Study****Suresh .V<sup>1</sup>, Nidhi Patel<sup>2</sup>, Bhoomika Patel<sup>3</sup>, Bhavisha Patel<sup>4</sup>**

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**ABSTRACT**

**BACKGROUND:** There is an extensive research work conducted at worldwide regarding burnout among police personnel and its impact on personal and professional life. It also been observed that burnout has leads to the development of some cardiovascular and other physical illnesses. The literature related to burnout and associated psychosomatic disorders are not well documented.

**AIM AND OBJECTIVES:** The present study is aimed to explore the relationship between burnout and development of psychosomatic disorders among police personnel.

**METHODS:** A case control research study was carried out among 60 police personnel of Godhra city, India by using non-probability purposive sampling technique. A standardized Organizational police stress questionnaire was given to the participants. The experienced burnout was assessed by numerical 7 point likert scale. The total score obtained from each participant was considered as an experienced burnout. Besides, structured psychosomatic disorder checklist was used. Obtained data was analyzed by using SPSS-20 software. Crude odd ratio applied to identify the risk of developing psychosomatic disorders among experienced burnout police personnel.

**RESULT:** The present study revealed that the police personnel having burn out are more vulnerable for developing psychosomatic disorders. While, burnout experienced polices are four times more (odds ratio: 3.85) risk of developing cardio vascular disease than who are non-experienced burnout police.

**CONCLUSION:** The present study concluded that, there is a strong association between burnout and development of psychosomatic disorders. It is imperative that the administrators and policy makers should take appropriate steps to promote the psychological well-being by modifying working environment.

**KEY WORDS:** Burnout, Psychosomatic disorders, police personnel, Case control study.

## 1. INTRODUCTION

Police personnel play an essential role in maintaining the law and order of the society. Burnout among police personnel is being acknowledged as a serious concern in all over the world. Burn out is a complex phenomenon; this arises as a response of persistent exposure to work related stressors and it results in disruption of the physical and psychological well-being of the individual.<sup>1</sup>

Police personnel in India are exposed to several distinct occupational stressors. The factors responsible for the stresses are long and unpredictable working hours, heavy workload, and persistent pressure to perform and managing high risk situation, lack of support from the superior and harmful physical environment.<sup>2</sup> Further, police personnel are struggling to cope with occupational stress which may place themselves at high risk of burnout and subsequently results in psychosomatic disorders. The psychosomatic disorder refers to real physical symptoms that are influenced by the mind and emotion.<sup>3</sup>

Evidences from the Bureau of police research 2019 reveals that in Gujarat, the police and general population ratio is 169 for one lakh. Which ultimately results in job dissatisfaction.<sup>4</sup> Decreased job satisfaction is playing major role in developing burnout, musculoskeletal and cardio vascular disorders.<sup>5</sup> It is generally agreed in various studies that shift work is considered as major stressor among employees. The majority of the police personnel also do shift work, this could cause disturbance in circadian rhythms and adverse cardiovascular problems. Recently, high prevalence of metabolic syndrome has been demonstrated among shift workers.<sup>6-7</sup> A UK study specified that, the rate of suicide is several times higher among police personnel compared with same age group general population.<sup>8</sup>

Several studies have documented regarding the risk of developing occupational stress. However, the finding of these studies was limited in terms of psychosomatic disorder. Therefore, we performed a retrospective case control study. In order to explore the relationship between burnout and risk of developing psychosomatic disorders among police personal.

## 2. AIM AND OBJECTIVES

The present study is aimed to explore the relationship between burnout and development of psychosomatic disorders among police personnel

## METHODS

The present study is designed to determine if an exposure (Burnout) is associated with an outcome (psychosomatic disorder). The researcher firstly, identified the cases (A group known to have psychosomatic disorder) and the controls (A group known to be free from psychosomatic disorders). Then observed back in time to identify which samples in each group had the exposures, Compared the frequency of the exposure in the case and control group.

A case control research study was carried out among police personnel of Godhra city, India. Permission was obtained from the institutional ethical committee and higher officials of police stations. The study included all the police personal working within the Godhra city police stations.

A total of 60 police personnel were selected by using non probability convenience sampling technique.

The sample size was estimated by using Raosoft software. The power analysis indicated that the minimum number of participants to get a power 95% was 60. The study included the samples who were working in Godhra city and both male and females. Police personnel were on medical leave are excluded. A structured psychosomatic checklist was developed and validated in vernacular language to find out the psychosomatic disorder (case group). Checklist consists of ten different psycho somatic disorders and all are measured by Yes-1 or No-0.

A standardized organizational police stress questionnaire (OPSQ) (McCreary& Thompson, 2006)<sup>9</sup> is a 20 item instrument, The OPSQ is a seven point intensity scale ranging from 1(no stress at all) to 7 (A lot of stress). An intensity of 4 represents (moderate stress on the scale), written in local language was used to assess the burnout level among police personnel. The total score was calculated by summing up answers given to the questions. In order to establish the reliability of the tool it was administered to 06 police personnel who had not participated in the main study. A split half method and Spearman Brown’s prophecy formula was used and the value found to be 0.75. Thus tool was found reliable. The validity of this questionnaire was re-examined by 4experts in field of psychiatric nursing.

The data collection period lasted for one month October 2019. Primarily, The participants were approached during their parade free time. Each of them was informed about aim of study and obtained written consent with the guaranty of their anonymity and confidentiality of data. The investigator surveyed all the police personnel by using psychosomatic disorder checklist to categories the participants into case and control group. Therefore, all the participants were requested to complete the checklist and returned back in given time. Eventually, the retrospective assessment of burnout was done by using organizational police stress questionnaire.

The obtained data were analyzed using SPSS-20 software. More precisely, descriptive statistics (percentage and mean) were used to describe the samples characteristics, the presence of psychosomatic disorder and level of burnout among police Personnel. Moreover, a crude Odd ratio was used to explore a possible risk of developing psychosomatic disorder between case and control group. Finally, Chi-square test used in order to find out the association between characteristics of police personnel with experienced burnout. The level of significance was set at p<0.05.

**RESULTS**

**TABLE 1 SOCIO DEMOGRAPHIC CHARACTERISTICS OF THE RESPONDENTS**

Characteristics		(Frequency & %)	(Frequency & %)
		Case group	Control group
Age	20-30 Years	20(47.6%)	07(38.9%)
	30-40 Years	10(23.8%)	03(16.7%)
	40-50 Years	07(16.7%)	05(27.8%)
	50 &Above	05(11.9%)	03(16.7%)
Gender	Male	25(59.5%)	07(38.9%)
	Female	17(40.5%)	11(61.1%)
Education	Secondary	03(7.1%)	01(5.6%)
	Higher secondary	15(35.7%)	09(50.0%)
	Graduation	17(40.5%)	05(27.8%)
	Post-graduation	07(16.7%)	03(16.7%)

Income	10,000-30,000	34(81.0%)	11(61.1%)
	30,001-60,000	06(14.3%)	02(11.1%)
	60,001-90,000	02(4.8%)	03(16.7%)
	Above 90,000	00(00%)	02(11.1%)
Years of Experience	Up to 5 years	25(59.5%)	08(44.4%)
	5-10 years	11(26.2%)	05(27.8%)
	10-15 years	05(11.9%)	02(11.1%)
	Above 15 years	01(2.4%)	03(16.7%)
Marital status	Single	11(26.2%)	05(27.8%)
	Married	30(71.4%)	13(72.2%)
	Divorced	01(2.4%)	00(00%)
Numbers of Children	None	18(42.9%)	09(50%)
	One	10(23.8%)	04(22.2%)
	Two	12(28.6%)	04(22.2%)
	Three or more	02(4.8%)	01(5.6%)
Designation	Class 3	31(73.8%)	13(72.2%)
	Class 4	11(26.2%)	05(27.8%)
Type of family	Nuclear	07(16.7%)	07(38.9%)
	Joint	35(83.3%)	11(61.1%)
Residential area	Rural	31(73.8%)	10(55.6%)
	Urban	11(26.2%)	08(44.4%)

A total of 60 police personnel participated in the study and properly completed the survey questionnaires. Table 1, shows the demographic characteristics of the respondent. The majority age group of the respondents was between 20 to 30 years in both groups. 25(59.5%) were male in case group and 11(61.1%) were female in case group. 17(40.5%) had graduation in case group and 09(50.0%) had higher secondary certificates. Maximum number of participant income was less than thirty thousand and worked less than 5 years in both groups. Nearly three fourth of the respondents 72% were married and half of the respondents have no children in both case and control group. In terms of designation respectively 73 & 72 % were class 3 category in both groups. Commonly most of the respondents belongs to joint family and resides in rural areas.

**TABLE 2 GENERAL PRESENTATIONS OF BURNOUT AND PSYCHOSOMATIC DISORDER AMONG POLICE PERSONNEL**

Psychosomatic Disorder				Odd ratio
Burnout	Yes	No	Total	
Yes	34(75.6%)	11(24.4%)	45	.654 (95% CI, .537-.797)
No	08(53.3%)	07(46.7%)	15	
Total	42(70%)	18(30%)	60	

Table-2 elaborated that 42 police personnel having psychosomatic disorder (Case group) and 18 persons without disease (Control group). Risk analysis was done using crude odds ratios. The odds ratio .654 (95% CI, .537-.797) shows that police personnel who are having burnout are more likely to develop psychosomatic disorder than who had not experienced.

**TABLE 3 CRUDE ODDS RATIO ANALYSIS BETWEEN BURNOUT AND DEVELOPMENT OF VARIOUS PSYCHOSOMATIC DISORDERS**

Psychosomatic disorders	Crude odds ratio [95% CI]	P value
	Case Group	
Cardiovascular diseases	3.85[.76-19.41]	.263
Integumentary diseases	.25[.05-1.30]	.263
Reproductive diseases (Men: Impotence, pre-ejaculation) (Women: Amenorrhea, infertility)	1.85[.32-10.61]	.108
Respiratory diseases (Shortness of breath, asthma)	.82[.70-.96]	.198
Genitourinary diseases	.85[.74-.98]	.178
Metabolic diseases(Diabetes, hypertension)	.67[.06-7.52]	.049
Gastro-intestinal diseases (Stomach pain, Constipation, irritable bowels, or diarrhea or indigestion )	.69[.13-3.47]	.069
Musculoskeletal diseases (Back pain, Pain in your arms, legs, or joints, knees, hips, etc.)	.79[.16-3.95]	.043
Others (Specify) Headaches, Dizziness, Insomnia, Fatigue.	6.27[1.08-36.24]	.341

The table 3 shows, a crude odds ratio revealed that burnout has significant relation with risk of developing psychosomatic disorder. While the risk of cardiovascular disease was 3.8 times higher in police person had experienced burnout odds value 3.85(95% CI,.76±19.41). similarly integumentary disease odds value 0.25(95% CI, .05-1.30), Reproductive diseases odds value 1.85(95% CI, .32-10.61), respiratory diseases odds value 0.82(95% CI, .70-.96), genitourinary odds value 0.85(95% CI, .74-.98), metabolic diseases odds value 0.67(95% CI, .06-7.52), Gastrointestinal diseases odds value 0.69(95% CI, .13-3.47), Musculoskeletal diseases odds value 0.79(95% CI, .16-3.95) and other diseases odds value 6.27(95% CI, 1.80-36.24).

**TABLE 4 ANALYSIS OF THE ASSOCIATION BETWEEN BURNOUT AND CHARACTERISTICS OF POLICE PERSONNEL**

Demographic Characteristics		Burnout		X2 value	DF	P Value
		PRESENT %	ABSENT %			
Age (years)	20-25 years	20(44.4%)	7(46.7%)	1.320	3	7.815
	26-30years	11(24.4%)	2(13.3%)			
	31-35 years	9(20%)	3(20%)			
	36-40 years	5(11.1%)	3(20%)			
Gender	Male	22(48.9%)	10(66.7%)	1.429	1	3.841
	Female	23(51.1%)	5(33.3%)			
Education	Secondary	1(2.2%)	3(20%)	6.594	3	7.815
	Hr. Secondary	18(40.0%)	6(40%)			
	Graduation	17(37.8%)	5(33.3%)			
	Post-graduation	9(20%)	1(6.7%)			
Income	10,000-20,000	34(75.6%)	11(73.3%)	1.407	3	7.815
	20,001-30,000	5(11.1%)	3(20%)			
	30,001-40,000	4(8.9%)	1(6.7%)			
	Above 40,001	2(4.4%)	00			
Years of experiences	Up to 3years	27(60%)	6(40%)	2.342	2	5.991
	4-6 years	11(24.4%)	5(33.3%)			
	7-9 years	4(8.9%)	3(20%)			
	Above 10 years	3(6.7%)	1(6.7%)			
Marital status	Single	12(26.7%)	4(26.7%)	.341	2	5.991
	Married	32(71.1%)	11(73.3%)			
	Divorced	1(2.2%)	00			
Numbers of children	None	19(42.2%)	8(53.3%)	4.277	3	7.815
	One	12(26.7%)	2(13.3%)			
	Two	13(28.9%)	3(20%)			
	Three or more	1(2.2%)	2(13.3%)			
Designation	Class 3	34(75.6%)	10(66.7%)	.455	1	3.841
	Class 4	11(24.4%)	5(33.3%)			
Type of family	Nuclear	11(24.4%)	3(20%)	.124	1	3.841
	Joint	34(75.6%)	12(80%)			
Residential area	Rural	30(66.7%)	11(73.3%)	.231	1	3.841
	Urban	15(33.3%)	4(26.7%)			

The table-4 depicts that there is no significant association between burnout with selected characteristics of police personnel. Thus, study implies that burnout is prone in any police personnel regardless of gender, education, income, experience, marital status. Hence, H2 failed to accept.

## **DISCUSSION**

This study revealed that high proportion of participants experienced burnout at work place which is similar to what was reported in Korea.<sup>10</sup> While, the prevalence was higher than that recorder in Sweden.<sup>11</sup> Similar study from Italy suggested that police officers suffered from occupational stress.<sup>12</sup> Also, a systematic review conducted in a city of Scotland revealed that there was a significant association for occupational stressors with burnout, distress.<sup>13</sup> Additionally, a study from North America reported that shift work characteristic and irregular schedule were related to higher burnout in police.<sup>14</sup> Previous literature from Jamaica, about stress and anxiety among police found positively associated with negative work characteristics.<sup>15</sup> Although, the prevalence of occupational stress can be reduced by vigilant coping was demonstrated in Germany.<sup>16</sup> Moreover, studies showed higher level of occupational stressors reflecting burnout among police personnel.<sup>17,18</sup>

In the present study, prevalence of psychosomatic disorder in 42(70%) police personnel is higher than what was reported in Madrid.<sup>19</sup> Similarly, study in Columbia revealed a positive and significant association between burnout and health indicators in police personnel.<sup>20</sup> Also, a systematic review conducted among South African police revealed the prevalence of burnout and chronic disease conditions like cancer.<sup>21</sup>

We found that burnout had significant relationship with risk of developing psychosomatic disorder. Where risk of cardiovascular disease was 3.8 times higher in police personnel who experienced burnout at work place that is similar to that recorded in Quebec.<sup>22</sup> Likewise, a study conducted in the city of Haryana revealed that prevalence of hypertension was significantly associated with occupational stressors.<sup>23</sup> Whereas, increased hypertension associated with stress also reported in European studies.<sup>24,25</sup> Subsequently, stress related to work among police personnel had association with sleep disorders.<sup>26-29</sup> We didn't found any such associations. Previous literatures concluded that a sound precautionary principle should be adopted to reduce the health risks of the police personnel.<sup>30-32</sup> This study also found increased odds ratio of gastrointestinal diseases among police with high burnout as reported in Taiwan.<sup>33</sup> Likewise, we observed increased musculoskeletal disorders among police with high burnout as found in Brazil.<sup>34</sup> Apart from these, studies examined general quality of life and stress of police personnel.<sup>35,36</sup>

## **3. CONCLUSION**

Prevalence of stress and burnout among police officers was high all around the world. Occupational stressor was associated with stress and burnout among police which leads to psychosomatic diseases. Profound measures must be formulated to protect the warriors.

## **ETHICAL APPROVAL**

Since the study involved human subjects, a formal ethical approval received from institutional ethical committee.

**INFORMED CONSENT**

Informed consent was obtained from participants and assured for anonymity.

**DECLARATION OF INTEREST**

The author declares that there is no financial and personal relationship with other people and organizations.

**CONFLICT OF INTEREST**

The author declares that they have no conflicts of interest.

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