

## COVID19 pandemic and Police Personnel – front line COVID 19 warriors; A Cross-sectional study.

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### ABSTRACT

**Background:** Due to COVID 19 pandemic, almost each sector was affected. Among them, police sector was the most underappreciated and vulnerable. Without them, achieving the primary objective of the lockdown restricting the outbreak would have been impossible. They risk catching the infection, taking it home and exposing their family. **Objective:** To assess depression, anxiety, stress among police persons during COVID 19; To find out the impact of COVID19 on their personal life. **Methodology:** This is Descriptive, cross-sectional study conducted on Police Persons in Narasarao Pet Division, Guntur. Sample population selected by simple random sampling. A self-designed, and semi-structured questionnaire and DASS -21 scale were used to collect the data. **Results:** Out of 60, 32 (54%) were 25-35 years of age, 53(88%) were males, 39(65%) were graduated, and 32(53%) were police constables. Out of them 8(1.8%) have past medical history and 20(33%) were COVID 19 positive. Out of them 16 (9.6%) were with depression, 32 (19.2%) with anxiety, and 25(15%) with stress. **Conclusion:** Due to the prolonged duration of working hours, inadequate supplementation of personal protection equipment (PPE) and irregular pay scale may influence their physical and mental health.

**Key word:** COVID 19, Police, DASS-21, Depression, Anxiety, Stress.

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### INTRODUCTION

Due to COVID 19 pandemic, almost every sector was affected. On March 24 2020, India ordered a nationwide lockdown, limiting India's entire 1.3 billion population as a preventive measure against the COVID-19 pandemic in India<sup>1</sup>. Among all the corona warriors, the most visible, yet most underappreciated, are the humble police people. Without them, achieving the lockdown's primary objective restricting the outbreak would have been impossible<sup>2</sup>. In place of the routine duties of law-and-order maintenance, crime control, and traffic management, the police had to make sure that the

lockdown was effective. The police need better appreciation in their role as the first responder in emergencies and consciously adopt disaster management, including disaster risk reduction activities as one of its primary functions. More importantly, the police force has been working under life-threatening conditions since many do not have access to personal protection equipment (PPE)<sup>2</sup>. Hundreds of them got infected and died<sup>2</sup>. Hence this study was made as an attempt to know the impact of COVID 19 on police personnel.

**Objectives:**

To assess depression, anxiety, stress among police persons during COVID 19 lockdown duties.

To find out the impact of COVID19 on their personal life.

**METHODOLOGY**

Study design: Descriptive Cross-Sectional Study

Sampling technique: Multistage sampling

Study setting area: Police stations under Chilakaluri pet circle, Guntur.

Study population: Police personnel working in police stations under Chilakaluri pet circle.

Sample size: 60 police personnel.

Study scheme: In Guntur district, six divisions are there, Narasaraopet subdivision selected by simple random sampling. Under this Narasaraopet subdivision, seven circles are there, Chilakaluri pet circle chosen by simple random sampling. Under Chilakaluri pet circle, four police stations are there, and 100 police personnel work. We took prior permission from a station house officer (SHO) and informed consent from the study population. We collected data from the police personnel who were present at the time of the visit—obtained sample size of 60. A self-designed, semi-structured questionnaire and DASS -21 scale were circulated to selected sample population by proforma to collect the data. The questionnaire consisted of questions about socio-demographic details, past medical and psychological history, and physical and emotional experience during COVID 19 lockdown duties. DASS 21 scale was used to collect data regarding Depression, Anxiety, and Stress.

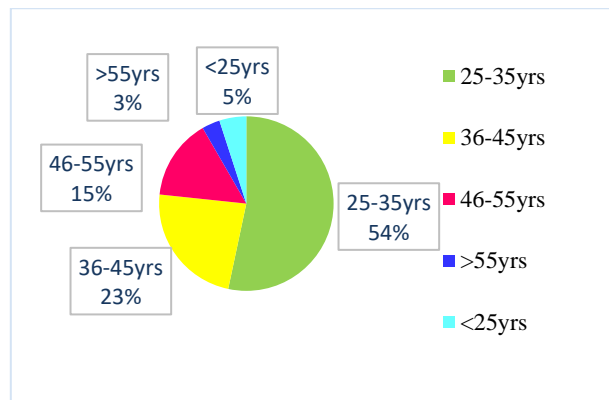
Data analysis: The data were entered in Microsoft Excel and analyzed statistically using SPSS software version 25 (Statistical package for the social sciences software). Data were interpreted in terms of descriptive statistics (frequency and percentages) and presented in tables, pie and bar charts.

**RESULTS**

Socio-demographic characteristics of the sample population:

Age group distribution was 5 % ( 3) in <25 years, 54% (32) in 25 to 35 years, 23 % ( 14) in 36 to 45 years, 15% (9) in 46 to 55 years and 3 % ( 2) in >55 years as shown in figure 1.

**Figure 1. Age distribution of the participants(n=60)**



Among participants, 88 % ( 53) were males, and 12 % ( 7) were females. Out of 60 study population, 65 % ( 39) were in graduation, 13 % ( 8) in Intermediate, 12 % ( 7) in post-graduation and 10 % ( 6) in SSC (Secondary School Certificate).

**Figure 2. Occupational category of participants (n=60)**

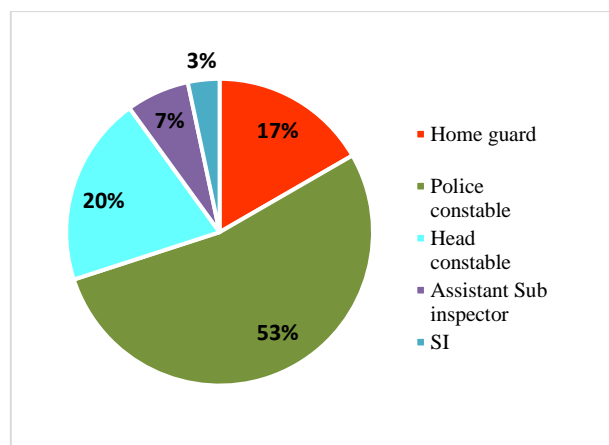
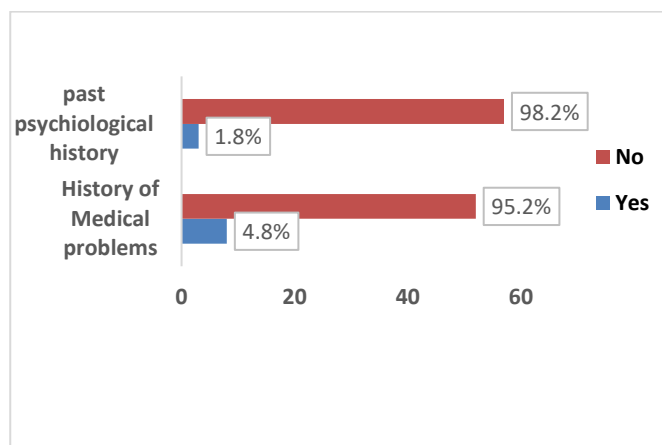


Figure 2 showing the occupational category of the study population. Out of 60, 3%(2) were in a cadre of sub-inspector of police,7%(4) in ASI, 17%( 10) in-home guard, 20%(12) in head constable and 53%(32) police constable cadre. Out of 60, 88% (53) were married, and 12 % ( 7) unmarried.

Figure 3 depicting the history of medical problems (Type 2 Diabetic Miletus, Hypertension, Bronchial Asthma) and past psychological history: In study population (n=60), found a history of medical problems in 4.8 % ( 8) and past psychological history in 1.8 % ( 3).

**Figure 3. Past Medical & Psychological problems history(n=60)**

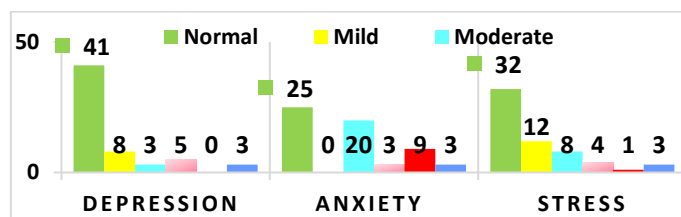


**Table 1: Perception of police personnel (n=60)**

S.no.	Questionnaire	Yes (%)	No (%)
1	Did you feel it an honour to serve as a Corona warrior?	96.70%	3.30%
2	Did you receive respect from society?	46.70%	53.30%
3	Did you receive a salary without fail?	6.70%	93.30%
4	Did you receive COVID 19 incentive from the government?	0%	100%
5	Did you feel anger about people's behaviour?	26.70%	73.30%
6	Did you handle stress during COVID 19 lockdown duties time?	40%	60%
7	Did you get enough PPE kits to wear?	61.70%	38.30%
8	Did you feel scared about contracting COVID19?	28.30%	71.70%
9	Did you spend time with your family?	10%	90%
10	Did you sleep well?	41.70%	58.30%
11	Did you consume nutritious food?	83.30%	16.70%
12	Did you check for COVID 19 symptoms regularly?	85%	15%
13	Did you undertake COVID19 test?	95%	5%
14	Did you ever get infected with COVID19?	33%	77%

Out of 60 police personnel, 33% (20) infected with COVID 19. Out of 60 police personnel, three persons did not fill the DASS scale. Out of 57 individuals, 9.6% (16) suffered from depression, 19.2% (32) with anxiety, and 15% (25) with stress.

**Figure 4. Depression, Anxiety and stress pattern among study participants (n=57)**



Out of 57 individuals, 4.56 % (8) suffered from mild depression, 1.71 % (3) with moderate and 2.85 % (5) with severe depression. Out of 57 individuals, 11.54% suffered from a moderate degree of anxiety, 1.71 % (3) with severe depression and 5.13 % (9) with extra severe depression. Out of 57 police personnel, 6.84 % (12) suffered from a mild degree of stress, 4.56 (8) with moderate stress, 2.28 % (4) with severe stress and 0.57 % (1) with extra severe stress (Figure 4).

Out of 20 COVID 19 positive police personnel, one person did not fill the DASS-21 scale. Table 2 shows that out of 19 COVID 19 infected individuals, depression, and anxiety were statistically significant (<0.05) Table 2.

**Table 2 Tables showing Chi-square test significance of Depression, Anxiety and stress.**

	Depression		Anxiety		Stress	
	Chi-square value	P-value	Chi-square value	P-value	Chi-square value	P-value
Police persons infected with COVID 19	9.74	0.045	19.44	0.001	10.92	0.53

**DISCUSSION**

There are minimal studies regarding COVID 19 and its impact on Police personnel. In our study, out of 60 police personnel, 38.3 % (23) reported that they lacked PPE (personal protective equipment) in times of need, 33 % (20) infected with COVID 19. Due to the prolonged duration of working hours, 90 % (54) were unable to spend time with their family, and 58.3 % (35) had sleep disturbances which could affect their psychological behaviour. Out of 57 individuals, 9.6% (16) suffered from depression, 19.2% (32) with anxiety, and 15% (25) with stress.

A study was done by Kokane et al., in, out of 102, 50% of the respondents had mental disturbance due to fear of the COVID-19 virus, whereas 32.4% reported being under stress due to multiple reasons the workplace<sup>3</sup>. Grover S et al., in their study, found 10.6% of the police personnel had significant anxiety, and 18% had significant depressive symptoms with overall psychological morbidity of 22.2%<sup>4</sup>. Khadse PA et al., in their study, found that police personnel are 8.78 times more likely to get affected by COVID-19 compared to the general population<sup>5</sup>. A study was done by Raina et al., and Reddy et al. noticed sporadic incidents of suicide attempts by police personnel associated with the fear of contracting COVID-19<sup>6,7</sup>.

### Conclusion

Prolonged duration of participation in work, reduced spending time with family, inadequate supplementation of PPE kits and irregular pay scale directly affected their physical and mental health. So, there is a need for these to address first. Health education regarding mental health problems and the promotion of relaxation practices positively cope with them.

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