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A Cross Sectional Observational Study , to Explore the Presence of Cardio Vascular Risk Factors For Heart Diseases Along With Exploration Of Metabolic Syndrome in Police Personnel of An Eastern District in India"

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Abstract: *Introduction- India being a vast democracy needs police force to maintain its democracy with minimum of crime and violence. The police force in India caters to the needs of its citizens by its personnel including various ranked officers, inspectors, and subordinates etc. Police personnel need to face situations which demand extremes in terms of emotions, physical stress, mental stress and other stresses due to shortage of staff , poor infrastructure and other associated factors. Of late studies across the globe have started to document the ill effects of these factors in terms of their cardiac health and mental health . Studies in India are few and mostly confined to southern parts of the country . This study is an endeavor to document the evidence about health indicators discussed in context of the eastern parts of the country . Methods A cross sectional observational study based in hospital setup done with permission from the district police administration. Data collected using Lab measurements and analyzed using SPSS version 22 . Results Most of the police personnel were working for more than 8 hours in 24 hours (69.85%) , 43% of the respondents agreed with the presence of occupational stress , 39% of the personnel were having a BMI greater than 25 , 21% were having a Systolic Pressure >130 mm of Hg , 25% of the respondents had Metabolic Syndrome present .Conclusion The study despite its small number of respondents found police personnel in need of ways to manage their work load , employ rehabilitation preogramme for their stress management , and routine checkup of vitals including varoious metabolic indicators so that they can take proactive action before any major illness in form of Stroke, Diabetes, Congestive heart failure or MI etc happens .*

Keywords: *Police Personnel ,Cardio Vascular Disease- Risk Factor ,Metabolic Syndrome ,Darbhanga ,India*

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I. Introduction

India is one of the largest democracy worldwide.[1]Police force is central element in a democratic society. Police force is an important factor in maintaining the social order across the democracy, their role increases with the heterogeneity and the size of the society[2]. Police force comprising of police officers and police personnel, is an occupation that demands maximum from the cardiovascular system as it often requires unpredicted sudden intense and strenuous physical activity[3]. With the changing lifestyle and altered dietary habits including increased tobacco chewing, India has now Cardiovascular Diseases (CVD) as the major cause of mortality . One of the reason cited is lack of optimal therapy[4] . With the rise in cardiovascular diseases there is also another threat emerging namely Metabolic Syndrome, which is a cluster of risk factors present in an individual including abdominal adiposity ,hypertension, dyslipidemia ,and reduced glucose tolerance .Metabolic Syndrome is highly prevalent and increasing globally ,with multiple evidence of it being one of the causative factors for Cardiovascular diseases and mortality associated[5]. Globally it has been found that Police personnel are at high risk for developing Cardiovascular Diseases and Metabolic Syndrome[6,7]. In comparison to

other occupation, police personnel have been found to be at increased risk of developing Cardiovascular diseases and Metabolic syndrome owing to more incidence of indicators like impaired fasting glucose, impaired glucose tolerance, and hypertension [8]. It has also been established globally that police personnel Experience high level of stress related to job, more often due to shift work, chances of experiencing violent events and pressure in the organization[9,10,11]. Studies done in India too concluded that Police Personnel have high incidence of cardiovascular risk factors present owing to various stress related to job and organizational structure, improper sleep , high incidence of alcohol consumption , tobacco use and long working hours [12,13] . Very few studies have tried to explore the presence of metabolic syndrome in conjunction with the cardiovascular risk factors in the police personnel, based in eastern parts of India, this study is an effort to document the cross sectional evidence generated thus.

II. Material And Methods

This was a hospital based cross sectional observational study. Target population covered most of the Police Personnel including sub inspectors, Assistant Sub inspectors and new recruits posted across the Darbahnga Town.These police personnel underwent clinical examination along with a closed questionnaire at Darbhanga Medical College and Hospital, OPD, Department of Medicine, in batches of 6 per day of examination with prior approval from the Ethical committee.

Study Period – The examination of the police personnel was done in Nov2013- March 2014. Followed by data analysis.

Inclusion Criterion- Police personnel who were apparently healthy and who were not suffering from any prediagnosed diseases like Interstitial heart diseases(IHD) or Diabetes Mellitus(DM) were included in our study.

Exclusion Criterion- Those police personnel who were already diagnosed as a case of DM, hypertension, dyslipidemia or IHD were not included in our study.

Study Measures :

Shift type

Official duty roster and their responses against the question of how many hours out of 24 hours was their duty? Were assessed to ascertain the duty hours being put in by each participant.

Lifestyle Behaviours

Smoking status was derived from the given questionnaire and smokers were classified as never smoker ,smoker ,type of smoke ,and grouped according to number of cigarette smoked per day .They were further classified as <10=1+,10-20 =2+,>20=3+. Also asked and grouped as yes or no, was the habit of tobacco chewing. We grouped the respondents on the basis of alcohol intake based on their response, Non Alcoholics, while those who responded about alcohol consumption were grouped as following <30 ml/day =1+,from 30-60 ml/day=2+,>60ml/day=3+ .An assessment for work related stress was done by considering any one of the positive response against these questions : if they often feel stressed due to their occupation due to any of the following reasons. Long duty hours, Untimely duty including night shift, Pressure from seniors, Dealing with criminals and crime. We assessed the Study participants using the Pittsburgh Sleep Quality Index (PSQI) question "During the past month, how many hours of actual sleep did you get at night?" .They were also asked for snoring ,if they were occasional snorers or loud snorers (often noticed by their colleague or family members). The groups were further classified as normal sleep , decreased sleep ,and irregular sleep . Snoring was grouped as yes and no.

Cardio Metabolic Risk factors

Before general and systemic examination we measured the height of each and every policemen using a scale and also recorded their weight which helped us to calculate BMI (which is wt in kg. / Height in meter2). We used BMI to define overweight (values between 25 and 29.9kg/m2), values greater than 30kg/m2 was defined as obese .We also measured waist circumference at the level of umbilicus using measuring tape.The resting systolic blood pressure of each police men was measured three times by sphygmomanometer with a cuff of 12.5 cm in supine position when they were completely relaxed and at least 1 hour after they arrived for their examination so that they take complete rest. Average values of second and third values is being reported here. Total serum cholesterol levels (mg/dL) were evaluated using 12 hour fasting blood sample.8 hour Fasting blood sample was used to ascertain fasting blood sugar levels.The metabolic syndrome (MetSyn) was defined using the modified version of the 2001 Third Report of the National Cholesterol Education Program Expert Panel on Detection, Evaluation, and Treatment of High Blood Cholesterol in Adults as published by Grundy et al .(Grundy et al., 2005)[14]. MetSyn was considered present in individuals with 3 or more of the following components: hypertension, reduced high density lipoprotein cholesterol, abdominal obesity, glucose intolerance or hypertriglyceridemia.

III. Results

205 police personnel reported for medical examination camp at Darbhanga Medical College & Hospital on different days. All of them were male of different age groups excepts 2 females, who were excluded from our final data analysis and also 4 male of age group less than 19 and more than 60 were excluded from our study. So we were left with 199 police personnel's data.

Table 1.Distribution of Study population and various indicators p values after comparing means doing ANOVA.

Indicators	Mean ± SD	Range	P value
1. Age (in years)	40.35±12.06	20-59	p<.00**
2. Working Hour (in hours)	10.37±2.795	6-18	p<.00**
3. Waist Line(in centimeter)	88.83±10.59	67-118	p<.00**
4. Weight (in Kgs)	71.85±11.37	48-106	p<.00**
5. Height (in meter)	1.69±.05	1.55-1.89	p>.05
6. Diastolic Pressure (in mmhg of mercury)	80±12.42	4-130	p<.00**
7. Systolic Blood Pressure(in mmhg of mercury)	124±118	90-200	p<.00**
8. Serum Triglyceride Levels (mg/dL)	146±35	10-300	p<.00**
9. Serum Cholesterol (mg/dL)	161.27±28.63	10-220	p>.05
10. Fasting Blood Sugar(mg/dL)	85.02±20.87	70-260	p<.00**
11. Serum Uric Acid(mg/dL)	5.261±.97	33.00-7.60	p>.05
12. HDL(mg/dL)	39.22±6.20	5-50	p>.05

Table 2. Comparing the various metabolic indicators with age group

										Total
Age Group (in Years)		**20-25**	**26-30**	**31-35**	**36-40**	**41-45**	**46-50**	**51-55**	**56-60**	
BMI (Weight in Kg /Ht in meters squared)	**<25**	**41**	**16**	**6**	**6**	**10**	**12**	**12**	**1**	**104**
	Percentage out of Total	**39.40%**	**15.40%**	**5.80%**	**5.80%**	**9.60%**	**11.50%**	**11.50%**	**1.00%**	**100.00%**
	>30	**0**	**0**	**1**	**3**	**3**	**6**	**4**	**1**	**18**
	Percentage out of Total	**0.00%**	**0.00%**	**5.60%**	**16.70%**	**16.70%**	**33.30%**	**22.20%**	**5.60%**	**100.00%**
	25-30	**3**	**1**	**2**	**3**	**16**	**27**	**18**	**7**	**77**
Chi Sqaure 72.22,p<.000	*Percentage out of Total*	**3.90%**	**1.30%**	**2.60%**	**3.90%**	**20.80%**	**35.10%**	**23.40%**	**9.10%**	**100.00%**
Waist (in cms)	**<80**	**25**	**8**	**0**	**1**	**1**	**1**	**5**	**2**	**43**
	Percentage out of Total	**58.10%**	**18.60%**	**0.00%**	**2.30%**	**2.30%**	**2.30%**	**11.60%**	**4.70%**	**100.00%**
	>90	**2**	**1**	**4**	**8**	**20**	**33**	**25**	**7**	**100**
	Percentage out of Total	**2.00%**	**1.00%**	**4.00%**	**8.00%**	**20.00%**	**33.00%**	**25.00%**	**7.00%**	**100.00%**
	80-90	**17**	**8**	**5**	**3**	**8**	**11**	**4**	**0**	**56**
Chi Sqaure 96.06,p<.000	*Percentage out of Total*	**30.40%**	**14.30%**	**8.90%**	**5.40%**	**14.30%**	**19.60%**	**7.10%**	**0.00%**	**100.00%**
Systolic Blood Pressure (in mmHg)	**<115**	**21**	**10**	**1**	**5**	**8**	**12**	**3**	**0**	**60**
	Percentage out of Total	**35.00%**	**16.70%**	**1.70%**	**8.30%**	**13.30%**	**20.00%**	**5.00%**	**0.00%**	**100.00%**
	>160	**0**	**0**	**0**	**0**	**2**	**0**	**3**	**0**	**5**
	Percentage out of Total	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**40.00%**	**0.00%**	**60.00%**	**0.00%**	**100.00%**
	>115-<130	**20**	**6**	**7**	**6**	**15**	**20**	**15**	**3**	**92**
	Percentage out of Total	**21.70%**	**6.50%**	**7.60%**	**6.50%**	**16.30%**	**21.70%**	**16.30%**	**3.30%**	**100.00%**
	>130-<160	**3**	**1**	**1**	**1**	**4**	**13**	**13**	**6**	**42**
Chi Sqaure 55.94,p<.000	*Percentage out of Total*	**7.10%**	**2.40%**	**2.40%**	**2.40%**	**9.50%**	**31.00%**	**31.00%**	**14.30%**	**100.00%**
Diastolic Blood Pressure (in mmHg)	**<85**	**41**	**14**	**6**	**8**	**18**	**31**	**17**	**4**	**139**
	Percentage out of Total	**29.50%**	**10.10%**	**4.30%**	**5.80%**	**12.90%**	**22.30%**	**12.20%**	**2.90%**	**100.00%**
	>100	**0**	**0**	**0**	**0**	**1**	**0**	**4**	**0**	**5**
	Percentage out of Total	**0.00%**	**0.00%**	**0.00%**	**0.00%**	**20.00%**	**0.00%**	**80.00%**	**0.00%**	**100.00%**
	>85-100	**3**	**3**	**3**	**4**	**10**	**14**	**13**	**5**	**55**
Chi Sqaure 34.31,p<.000	*Percentage out of Total*	**5.50%**	**5.50%**	**5.50%**	**7.30%**	**18.20%**	**25.50%**	**23.60%**	**9.10%**	**100.00%**
Fasting Blood Glucose (in mg/dL)	**Greater than 120 mg/dL**	**0**	**0**	**0**	**1**	**1**	**1**	**5**	**1**	**9**
	Percentage out of Total	**0.00%**	**0.00%**	**0.00%**	**11.10%**	**11.10%**	**11.10%**	**55.60%**	**11.10%**	**100.00%**
	Less than 120mg/dL	**44**	**17**	**9**	**11**	**28**	**44**	**29**	**8**	**190**
Chi Sqaure 13.43,p>.05	*Percentage out of Total*	**23.20%**	**8.90%**	**4.70%**	**5.80%**	**14.70%**	**23.20%**	**15.30%**	**4.20%**	**100.00%**
Total		**44**	**17**	**9**	**12**	**29**	**45**	**34**	**9**	**199**
	Percentage out of Total	**22.10%**	**8.50%**	**4.50%**	**6.00%**	**14.60%**	**22.60%**	**17.10%**	**4.50%**	**100.00%**

Table 3. Comparing the age with snoring , sleep ,occupational stress and working hours .

		Snoring			Sleep				Occupational Stress			Working Hour Group				Total
		Y	N		Decreased	Irregular	Normal		Y	N		>12 Hour	<8hours	8-12 Hou		
Age group	20-25	3	41		2	0	42		15	29		21	4	19		44
	% within Age group	6.80%	93.20%		4.50%	0.00%	95.50%		34.10%	65.90%		47.70%	9.10%	43.20%		100.00%
	26-30	1	16		0	0	17		5	12		4	0	13		17
	% within Age group	5.90%	94.10%		0.00%	0.00%	100.00%		29.40%	70.60%		23.50%	0.00%	76.50%		100.00%
	31-35	3	6		0	0	9		4	5		2	1	6		9
	% within Age group	33.30%	66.70%		0.00%	0.00%	100.00%		44.40%	55.60%		22.20%	11.10%	66.70%		100.00%
	36-40	6	6		3	1	8		6	6		2	4	6		12
	% within Age group	50.00%	50.00%		25.00%	8.30%	66.70%		50.00%	50.00%		16.70%	33.30%	50.00%		100.00%
	41-45	12	17		6	0	23		16	13		3	3	23		29
	% within Age group	41.40%	58.60%		20.70%	0.00%	79.30%		55.20%	44.80%		10.30%	10.30%	79.30%		100.00%
	46-50	15	30		6	0	39		19	26		3	3	39		45
	% within Age group	33.30%	66.70%	CHI	13.30%	0.00%	86.70%	CHI	42.20%	57.80%	CHI	6.70%	6.70%	86.70%	CHI	100.00%
	51-55	11	23	SQAURE	7	0	27	SQAURE	15	19	SQAURE	2	5	27	SQAURE	34
	% within Age group	32.40%	67.60%	Value	20.60%	0.00%	79.40%	Value	44.10%	55.90%	Value	5.90%	14.70%	79.40%	Value	100.00%
	56-60	5	4	23.770	2	0	7	28.029	5	4	5.316	1	2	6	44.931	9
	% within Age group	55.60%	44.40%	p<.00	22.20%	0.00%	77.80%	p<.05	55.60%	44.40%	p>.05	11.10%	22.20%	66.70%	p<.00	100.00%
	Total	56	143		26	1	172		85	114		38	22	139		199

		Tobacco chewing			Alcohol consumption Graded*					Smokers Graded*				Total
		N	Y		0	1+	2+	3+		0	1	2		
Age group	20-25	35	9		38	5	1	0		38	6	0		44
	% within Age group	79.50%	20.50%		86.40%	11.40%	2.30%	0.00%		86.40%	13.60%	0.00%		100.00%
	26-30	11	6		10	7	0	0		13	4	0		17
	% within Age group	64.70%	35.30%		58.80%	41.20%	0.00%	0.00%		76.50%	23.50%	0.00%		100.00%
	31-35	4	5		5	1	1	2		7	2	0		9
	% within Age group	44.40%	55.60%		55.60%	11.10%	11.10%	22.20%		77.80%	22.20%	0.00%		100.00%
	36-40	5	7		6	4	0	2		9	2	1		12
	% within Age group	41.70%	58.30%		50.00%	33.30%	0.00%	16.70%		75.00%	16.70%	8.30%		100.00%
	41-45	11	18		15	10	2	2		21	8	0		29
	% within Age group	37.90%	62.10%		51.70%	34.50%	6.90%	6.90%		72.40%	27.60%	0.00%		100.00%
	46-50	17	28	CHI	25	10	1	1	CHI	36	8	1	CHI	45
	% within Age group	37.80%	62.20%	SQAURE	55.60%	40.00%	2.20%	2.20%	SQAURE	80.00%	17.80%	2.20%	SQAURE	100.00%
	51-55	13	21	Value	23	7	1	3	Value	28	6	0	Value	34
	% within Age group	38.20%	61.80%	28.555	67.60%	20.60%	2.90%	8.80%	32.991	82.40%	17.60%	0.00%	15.857	100.00%
	56-60	3	6	p<.00	5	3	0	1	p<.05	8	0	1	p>.05	9
	% within Age group	33.30%	66.70%		55.60%	33.30%	0.00%	11.10%		88.90%	0.00%	11.10%		100.00%
	Total	91	148		127	55	6	11		188	36	3		199

Table 4. Relationship between Tobacco chewing, Alcohol consumption, and Smoking with age. A&B.

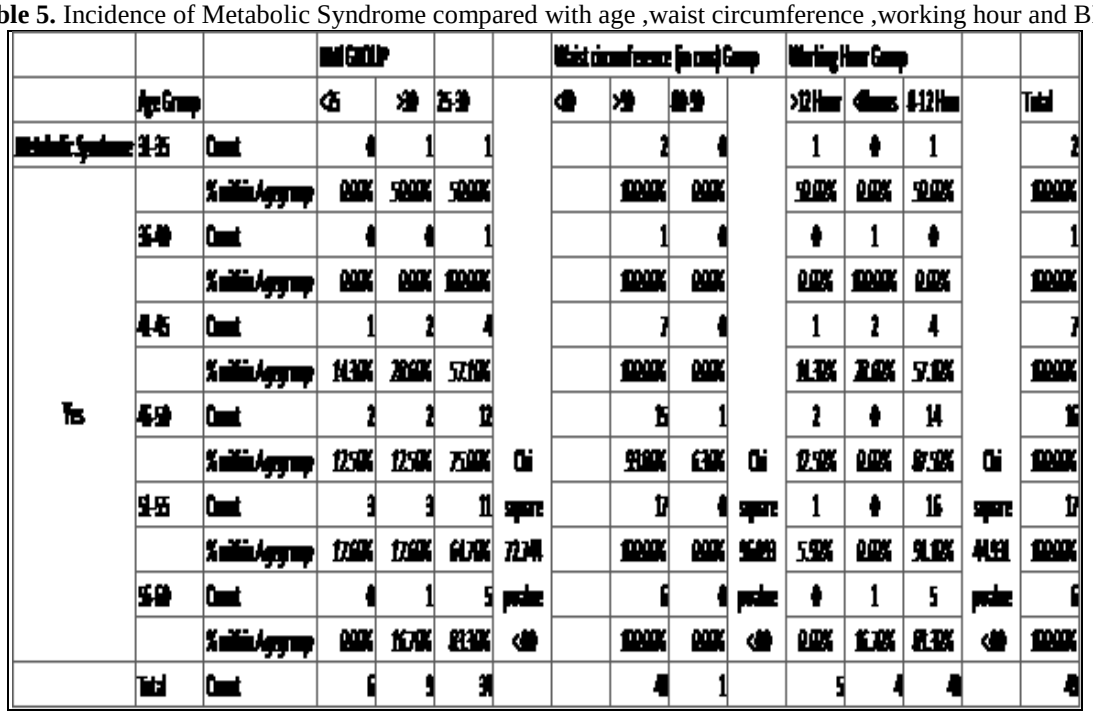
A.

B.

		Alcohol Consumption Graded*					Tobacco			Total
		0	1+	2+	3+		N	Y		
Working Hours Per day	>12 Hour	33	3	1	1	Chi Square 15.518 ,p<.05	27	11	Chi Square 9.239 ,p<.05	38
	<8hours	13	5	2	2		8	14		22
	8-12 Hou	81	47	3	8		64	75		139
Total		127	55	6	11		99	100		199

Alcohol consumption graded* as <30 ml (Occasionally) 1+, 30-60 ml (Mod) 2+> 60 ml (Heavy Drinker) 3+ Nonalcoholic 0. While **smokers were graded* as**<10 cigarettes a day as 1, 10-20 cigarettes a day as 2, > 20 cigarettes a day as 3, While those who never smoked as 0.

Table 5. Incidence of Metabolic Syndrome compared with age ,waist circumference ,working hour and BMI



All factors except age compared in this table are modifiable .Chi square values are given for calculations done against the total population.

Table 6. Multiple Logistic Regression analysis with metabolic syndrome as the dependent factor (Enter method) for highlighting the predictors for Metabolic Syndrome in the study population.

Omnibus Tests of Model Coefficients				
		Chi-square	df	Sig. (p value)
Step 1	Step	127.575	10	.000 (p<.00)
	Block	127.575	10	.000 (P<.00)
	Model	127.575	10	.000 (p<.00)

Variables in the Equation								
		Odds Ratio	95% C.I. for Odds ratio		S.E.	Wald	df	Sig.(p value)
			Lower	Upper				
Step 1[a]	Age	1.086	.988	1.195	.049	2.906	1	0.08(p>.05)
	Working Hour	.766	.587	.999	.136	3.863	1	0.049(p<.05)
	Weight	.920	.478	1.771	.334	.062	1	0.803(p>.05)
	Height	408089.868	.000		31.600	.167	1	0.682(p>.05)
	BMI	1.244	.190	8.159	.960	.052	1	0.819(p>.05)
	BMI (<25)					1.795	2	0.407(p>.05)
	BMI group(>25-<30)	1.048	.158	6.937	.964	.002	1	0.961(p>.05)
	BMI group(>30)	.238	.023	2.444	1.189	1.460	1	0.226(p>.05)
	Waist Line	1.235	1.081	1.411	.068	9.611	1	0.000(p<.00)
	SBP	1.092	1.049	1.137	.021	18.166	1	0.000(p<.00)
	Serum Triglyceride	1.035	1.016	1.054	.009	13.417	1	0.000(p<.00)
	Constant	.000			54.415	1.221	1	.269
a. Variable(s) entered on step 1: Age, Working Hour, Weight, Height, BMI, and BMI (<25), BMI (>25-<30), BMI >30, Waist Line, SBP, and Serum Triglyceride.								

In our study we found majority of the police men working for long hours per day (10.37 hours per day mean value) table 1, While most of the participants had systolic pressure (124 mm of Hg mean value) with high

levels of serum triglyceride levels and Serum cholesterol levels (146 mean and 161.27 mean respectively) .Most of the participants were having HDL less than the desired 40mg/dL (mean value 39.22) Table1 . Mean triglyceride levels of the participants were closing the borderline value (150-199 mg/dL) Table 1 . We also found that 48% police personnel were having a BMI>25 while 9% were overweight.(table2) When this is related to the age we get statistically significant results (p<.00) , Suggesting as the age increases the BMI also can increase .A waist circumference >90cm was also found among 50% (100) participants ,it was also seen statistically significant (p<.00) in relation to age . The age group of 41-55 years is most prone to have increased BMI, Waist circumference >90cm. (Table2) .The systolic blood pressure measured in the age group of 41-55 was also showing 71% of police personnel with pressures ranging from >130-<160 mm of Hg with high statistical significance (p<.00) .(Table 2) .Diastolic Pressure was also seen >85-100 mm of Hg among the 67% of personnel between the age group of 41-55 with high statistical significance (p<.00) .(Table 2) . Fasting blood glucose was also found more than 120mg/dL in 55% of personnel of age group 51-55 with no statistical significance (p>.05).

Analysis of Table 3 reveals 43% of the participants studied to be having occupational stress with maximum (59%) among age group of 41-55 with no statistical significance (p>.05). Similarly decreased sleep was also observed among 13% of the studied population with maximum prevalence in the age group of 41-55 73% with a high statistical significance. The distribution of working hours seems to be associated with age group as out of 38 personnel working more than 12 hours per day were from Age group of 20-25 years, 65%of the participants were working more than 8 hours a day but less than 12 hours a day with most from the age group of 41-55 years with high statistical significance (p<.00).Snoring was observed mostly 67% of participants who were between the age group of 41-55.It was observed that the working hour and alcohol consumption is more in personnel working in shifts greater than 8 hours per day while the age group between 41-55 had the maximum participants consuming alcohol. (Table 4A&B). Tobacco chewing was also seen in more than 50% (p<.00) of the participants with maximum consumers in the age group of 41-55.We also assessed the presence of Metabolic Syndrome with the defined criterion [13]. (Table5).We were able to find with high statistical significance (p<.00)that personnel having a BMI of more than 25 and in between 30 , having a Waist circumference of more than 90cms ,and those who were working more than 8 hours a day but under 12 hours per day , were most among those who were having chances to develop Metabolic Syndrome .

The multiple logistic regression analysis was able to give us predictors for developing Metabolic Syndrome. Working hours per day was closely related for the development of Metabolic Syndrome with an Odds ratio .766. Waist Line and Systolic Blood Pressure were of very high statistical significance (p<.00) as contributors to the development of Metabolic Syndrome with Odds Ratio 1.235 and 1.092 respectively. (Table6).

IV. Discussion

In recent years studies on health profile of police man in India and across the world has been studied. Studies conducted in India and across the world have found prevalence of cardiovascular risk factors uniformly among the police personnel with presence of long working hours as an important factor[15,16]. In studies conducted in norther parts of India , Long working hours by the police personnel also has been associated with alcoholism and other stress related disorders .In our study also we had similar findings[17,24].In Puducherry study too long working hours has been the predominant reason for stress among the studied police personnel [23]. Similarly studies conducted in the United states of America and United Kingdom had established the relation of long working hours (>8 hours per 24 hours) by police personnel to be associated with increased presence of risk factors for developing cardio vascular disorders and stress [21,22]. Suresh et al In India in their study had suggested long working hours and associated stress as one of the reasons for development of alcoholism, and risk factors development for cardio vascular diseases [18]. The study on Italian police personnel established the presence of stress prevalent among the personnel .Our study also was able to establish the presence of stress in the police personnel studied. The presence of metabolic syndrome also has been attributed to presence of stress and other associated factors [25]. Even the police personnel working in rural set up experience the same amount of stress and are prone to develop associated ailments like Metabolic syndrome , cardio vascular diseases etc[26]. Similarly in Our study we were able to identify the presence of long working hours, stress, metabolic syndrome and other cardio vascular risk factors among the police personnel studied.

V. Conclusion

On the basis of the results and available literature we conclude that the police force is constantly under unexpected sudden nesses demanding strenuous output from cardio vascular system. Long working hours are taking a toll on the health of working individuals leading to development of stress , habit of alcoholism ,development of cardio vascular risk factors and development of metabolic syndrome. We recommend certain routine medical checkups and duty roster which ensures no duty goes beyond 8 hours per 24 hours for any individual. Police personnel who are more than 35 years of age are in need of more stringent health monitoring

particularly the waist circumference, their blood pressure and lipid profiles, along with being provided proper medical care and therapy if indicated . Obviously for the society to be safe crime free we need to take care of our police personnel with more promptness. An incentive based on the improved health indicators after completed medical routine monitoring coupled with dietary and psychological counselling might be one possible policy change.

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