

Contributing Risk Factors overview of High Castelli Risk Index–I of Surabaya Police Officer: A Cross-Sectional Study

Meity Ardiana¹, Dwika Rasyid Firmanda¹, Inna Maya Sufiyah¹, Primasitha Maharany Harsoyo¹, Hanesty Oky Hermawan¹

¹Faculty of Medicine, Airlangga University

PURPOSE

This study aims to evaluate the potential risk factors contributing to high Castelli Risk Index–I (CRI–I) in police officer

METHODS

This observational-descriptive with cross-sectional design study enrolled 3,018 members of East Java police officer. Data was obtained using physical and laboratory examinations that includes systolic blood pressure (SBP), diastolic blood pressure (DBP), body mass index (BMI), low density lipoprotein-C (LDL–C), high density lipoprotein–C (HDL–C), triglyceride (TG), total cholesterol (TC). BMI was classified into < 25 (normal BMI) and > 25 (higher than normal BMI). High blood pressure (BP) was defined as SBP \geq 140 mmHg and/or DBP \geq 90 mmHg. CRI-I was calculated using the formula of TC/HDL–C and was defined >5 as at risk and <5 as normal. Statistics were performed on SPSS version 25 and cross-tabulation test was performed on the CRI–I, BP, and BMI in a table form

RESULTS

Variables	CRI - I				Sig.	OR	95% CI	
	< 5		> 5				Lower Bound	Upper Bound
	n	%	n	%				
BMI								
a. < 25	1330	44.1	625	20.7	0.043	1.184	1.005	1.395
b. > 25	761	25.2	302	10				
Hyper-tension					0	1.394	1.179	1.65
a. No	1545	51.2	621	20.6				
b. Yes	546	18.1	306	10.1				

927 (30.7%) respondents had a CRI–I score > 5. Result of the cross-tabulation test of the high CRI–I score with the physical examination showed association with high BP (OR=1.394; p=0.0), and higher than normal BMI (OR=1.184; p=0.043)

CONCLUSION

There was a significant associations between high CRI-I and high blood pressure and higher than normal BMI among a clinical sample of Police Officers