BUKTI KORESPONDENSI

Judul Artikel : Higher cardiovascular risks and Atherogenic Index of Plasma found in police officers of developing country in Surabaya, East Java, Indonesia

Jurnal : Clinical Epidemiology and Global Health

Author : Meity Ardiana a,b,*, Primasitha Maharany Harsoyo, Hanestya Oky Hermawan, Inna Maya Sufiyah b, Dwika Rasyid Firmanda b, Saskia Ratna Desita, Annisya Dinda Paramitha c, Arisvia Sukma Hariftyani c, Farah Aisha Shabrina c, Fita Triastuti

Coresponding : Meity Ardiana

No.	Perihal	Tanggal	Komentar Editor Jurnal	Komentar Penulis
1	Pengiriman Artikel	30 Juni 2022	Editor mengirim pesan otomatis. Bahwa Nomor Naskah: CEGH-D-22-00344R1, Judul "Higher Cardiovascular Risks and Atherogenic Index of Plasma Found in Police Officers of Developing Country in Surabaya, East Java,Indonesia" telah diterima pada jurnal Clinical Epidemiology and Global Health. Untuk melacak status naskah, penulis masuk ke https://www.editorialmanager.com/cegh/, dan navigasikan ke folder "Revisi Sedang Diproses". **Email :** 30 Juni 2022 pukul 19.08	-
		2 Juli 2022, 8 Agustus 2022	Editor memberitahukan bahwa naskah sedang ditinjau. Proses tinjauan sejawat dapat memakan waktu cukup lama, jadi jurnal mencoba layanan baru yang memungkinkan penulis melacak status tinjauan sejawat secara lebih detail. Penulis dapat mengakses layanan ini di sini: https://track.authorhub.elsevier.com?uuid=c1569e1e-3184-4243-8ef9-39f4e21d3633 **Email :** 2 Juli 2022 pukul 14.45	Sebelumnya, penulis mengirimkan pertanyaan ke editor untuk mengetahui status artikel : Beberapa minggu sejak penyerahan revisi terakhir kami. Bisakah Anda membantu saya melacak status artikel kami saat ini?

				Email : 08/08/2022 pukul 09.21
2	Pengiriman Revisi dan penerimaan artikel untuk diterbitkan	09 Agustus 2022	Editor mengonfirmasi bahwa status artikel Anda sekarang "Dalam Peninjauan" dengan satu ulasan selesai dan menunggu pengulas lain menyetujui dan mengirimkan komentarnya sebelum keputusan dapat diambil. **Email :** 9 Agustus 2022 pukul 09.41	-
		23 Agustus 2022	Editor memberitahu bahwa naskah telah diterima untuk diterbitkan. Komentar editor dan komentar pengulas lainnya, ada di link bawah. Naskah yang diterima sekarang akan ditransfer ke departemen produksi. Editor akan membuat bukti untuk diperiksa, dan melengkapi sejumlah formular. **Email :** 23 Agustus 2022 pukul 10.51 Editor mengirimksn email untuk melacak status revisi artikel selama proses publikasi, silakan gunakan layanan pelacakan artikel kami: https://authors.elsevier.com/tracking/article/details.do?aid=101132&jid=CEGH&surname=Ardiana **Email :** 23 Agustus 2022 pukul 12.06	Penulis menjawab komentar dari editor dan reviewer pada Author's Response to Reviewer Comments dan melakukan beberapa revisi (lampiran naskah): • Judul: Penulis menambahkan "Surabaya, Jawa Timur, Indonesia" sebagai tempat penelitian menemukan tempat tersebut (hal. 1) • Abstrak: Penulis menambahkan rincian lebih lanjut tentang lokasi dan cara pengumpulan data. (hal. 1) • Kesimpulan: Penulis memodifikasi kesimpulan, menurut kedua kelompok memiliki faktor risiko tinggi.(hal.6) • Pendahuluan: Penulis memperjelas tujuan penelitian. (hal. 2)

				• Metode: Penulis menambahkan rincian lebih lanjut tentang proses persyaratan, pertimbangan etis, alat dan metode antropometri dan sampel darah, referensi dan nilai batas semua parameter, mengoreksi kriteria inklusi. (hal.4) • Hasil : Penulis melakukan beberapa revisi pada hasil kami mengenai pengulangan, dan menambahkan lebih banyak informasi tentang perbedaan/perbandingan antara dua kelompok.(hal.9) • Diskusi: Penulis melakukan beberapa revisi dalam diskusi. (hal.6) • Kekuatan dan keterbatasan: kami memberikan lebih banyak kekuatan dan keterbatasan pada penelitian kami. (hal.9)
3	Penerimaan Artikel untuk dipubilakasikan	25 Agustus 2022	Editor mengirimkan ucapan selamat atas diterimanya artikel untuk diterbitkan. **Email :** 25 Agustus 2022 pukul 19.47	-

		27,30,31 Agustus 2022	Editor mengalami masalah dengan file elektronik dan tidak dapat memproses artikel Anda lebih lanjut hingga masalah berikut teratasi: * 1.[penulis judul] editor telah menerima afiliasi(5), tetapi penunjuk terkait tidak ada dalam grup penulis, silakan periksa dan beri saran. 2.[penulis judul] Kami telah menerima nama penulis (Fita Triastuti), tetapi penunjuk terkait tidak ada dalam grup penulis, silakan periksa dan beri saran. **Email :** 27 Agustus 2022 pukul 18.17 Editor memberikan respon atas pengiriman revisi. **Email :** 31 Agustus 2022 pukul 13.24	Penulis melakukan perbaikan dan mengirimkan lampiran title page revised. **Email :** 30 Agustus 2022 pukul 09.02
		3,4 ,5 September 2022	Editor mengirimkan kembali email dan meminta file dikirim dalam bentuk MS doc format. **Email :** 3 September 2022 pukul 07.10 Editor merespon email penulis. **Email :** 3 September 2022 pukul 22.31 Editor merespon email penulis. **Email** : 5 September 2022 pukul 11.31	Penulis mengirimkan revisi dalam bentuk MS word format. **Email :** 3 September 2022 pukul 22.11 Penulis mengirinkan revisi terbaru. **Email :** 4 September 2022 pukul 12.53
		8 September 2022	Editor mengirimkan pesan untuk Penulis dalam melengkapi formulir jurnal. **Email :** 8 September 2022 pukul 12.25	-
		10 September 2022	Editor mengirimkan pesan untuk meninjau dan mengirimkan koreksi langsung di layar menggunakan tautan di bawah ini dan menemukan petunjuk di halaman awal tentang cara melakukan koreksi. https://elsevier.proofcentral.	Penulis telah melakukan koreksi melalui website jurnal.

			com/en-us/landing-page.html?tanda=698b6011a9659301e500f0d88df3e6 **Email :** 10 September 2022 pukul 02.16 Editor menyampaikan konfirmasi bahwa Penulis telah mengisi Publishing Agreement Form. **Email :** 10 September 2022 pukul 12.55 Editor menyampaikan konfirmasi bahwa Penulis telah mengisi Rights and Access Form. **Email :** 10 September 2022 pukul 12.55 Editor menyampaikan konfirmasi bahwa Penulis telah menggunakan aplikasi Proof Central. **Email :** 10 September 2022 pukul 13.49	
		7,8 November 2022	Editor mengirimkan proof revisi artikel Anda 101132 di jurnal. Email : 7 November 2022 pukul 10.55 Editor mengkonfirmasi telah menerima persetujuan revisi proof. **Email :** 8 November 2022 pukul 12.48	Penulis telah memperbaiki proof. **Email :** 8 November 2022 pukul 09.15 Penulis menjawab email bahwa tidak akan ada koreksi apa pun. **Email :** November 08, 2022 02:15

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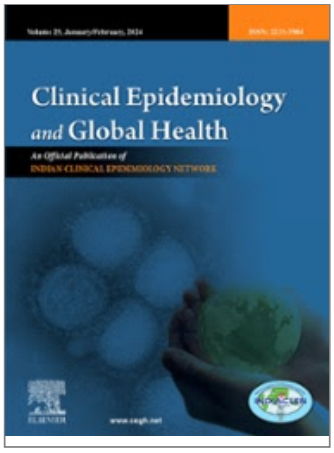

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Author's Response To Reviewer Comments

Close

Author Respond to Reviewer

Dear Editor and Reviewer,
Thank you for reading and evaluating our manuscript.
Here we made some revisions:
• Title: we added "Surabaya, East Java, Indonesia" as the place where the study found the place
• Abstract: we added more details about location and how the data was collected
• Conclusion: we modified our conclusion, according to both groups have high-risk factor
• Introduction: we clarify the aim of the study
• Method: we added more details about the requirement process, ethical consideration, tools and methods for anthropometrics and blood samples, reference and cut-off value of all parameters, corrected the inclusion criteria
• Results: we made some revisions in our results regarding repetitiveness, and added more information about the differences/comparison between two groups
• Discussion: we made some revisions in our discussion
• Strength and limitation: we provided more strengths and limitation of our study

Close

Higher Cardiovascular Risks and Atherogenic Index of Plasma Found in Police Officers of Developing Country

Running Title: Cardiovascular Risks in Police Officers

Primasitha Maharany Harsoyo[1], Meity Ardiana*[2,3], Hanestya Oky Hermawan[1], Inna Maya Sufiyah[3], Dwika Rasyid Firmanda[3], Saskia Ratna Desita[4], Annisya Dinda Paramitha[4], Arisvia Sukma Hariftiyani[4], Farah Aisha Shabrina[4], Fita Triastuti[5]

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All authors take responsibility for all aspects of the reliability and freedom from bias of the datapresented and their discussed interpretation

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Keywords (5)
Cardiovascular risks, atherogenic index of plasma, police officer, preventive cardiology, atherosclerosis

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Kepada: A.Achuthan@elsevier.com

Dear Editor,
we are sorry for the late reply, here we attached the revision you mentioned. we are really grateful for your help. Thank you in advance
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Title Page Revised - CEGH (1).pdf
353K

Achuthan, Arivalagan (ELS-CON) <A.Achuthan@elsevier.com> 31 Agustus 2022 pukul 13.24
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A.Achuthan@elsevier.com <A.Achuthan@elsevier.com> 3 September 2022 pukul 07.10
Kepada: meityardiana@fk.unair.ac.id

Our reference: CEGH 101132
Article reference: CEGH_CEGH-D-22-00344
Article title: Higher Cardiovascular Risks and Atherogenic Index of Plasma Found in Police Officers of Developing Country in Surabaya, East Java, Indonesia
To be published in: Clinical Epidemiology and Global Health

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Our reference: CEGH 101132
Article reference: CEGH_CEGH-D-22-00344
Article title: Higher Cardiovascular Risks and Atherogenic Index of Plasma Found in Police Officers of Developing Country in Surabaya, East Java, Indonesia
To be published in: Clinical Epidemiology and Global Health

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Indonesia
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Cc: editorcegh@gmail.com

CEGH 101132

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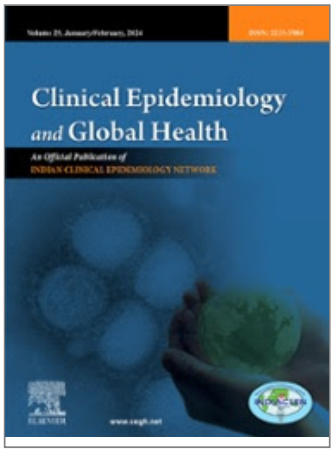

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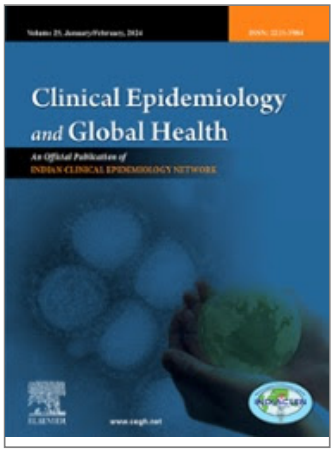

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Our reference: 101132

Article title: Higher cardiovascular risks and Atherogenic Index of Plasma found in police officers of developing country in Surabaya, East Java, Indonesia

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Clinical Epidemiology and Global Health

Higher Cardiovascular Risks and Atherogenic Index of Plasma Found in Police Officers of Developing Country in Surabaya, East Java, Indonesia

--Manuscript Draft--

Manuscript Number:	CEGH-D-22-00344R1
Article Type:	Original article
Keywords:	Cardiovascular risks; atherogenic index of plasma; police officer; preventive cardiology; atherosclerosis
Corresponding Author:	Meity Ardiana, M.D., Ph.D Dr Soetomo General Hospital Surabaya, East Java INDONESIA
First Author:	Primasitha Maharany Harsoyo, M.D.
Order of Authors:	Primasitha Maharany Harsoyo, M.D.
	Meity Ardiana, M.D., Ph.D
	Hanestya Oky Hermawan, M.D.
	Inna Maya Sufiyah, M.D.
	Dwika Rasyid Firmanda, M.D.
	Saskia Ratna Desita, B. Med
	Annisya Dinda Paramitha, B. Med
	Arisvia Sukma Hariftyani, B. Med
	Farah Aisha Shabrina, B. Med
	Fita Triastuti, DVM.
Abstract:	Background: Police officers are known for fieldwork shifts, psychological stress, and prolonged physical activity that are associated with cardiovascular disease (CVD). We aim to determine the differences in CVD risks factor and Atherogenic Index of Plasma (AIP) profiles as a predictor of cardiac events between police officers and civilians in a developing country as an evaluation and strategic preventive measure for CVD. Methods: 978 participants were enrolled as subjects in this cross-sectional study. Data used were obtained during medical check-ups using complete physical and laboratory examinations including blood pressure, body mass index (BMI), triglycerides (TG), low-density lipoprotein cholesterol (LDL-C), high-density lipoprotein cholesterol (HDL-C), total cholesterol, fasting blood sugar, and AIP between 2019 to 2020 at Bhayangkara State Police Hospital Surabaya. Mann-Whitney U test was performed using IBM SPSS version 25. Results: There are significant differences in systolic (p=0.000) and diastolic blood pressure (p=0.003), triglycerides (p=0.000), LDL-C (p=0.006), total cholesterol (p=0.000), fasting blood glucose (p=0.001), and the AIP (p=0.000) between the police and civilian groups, with the latter showing a tendency of having higher rates. Conclusions: CVD risk was found in both groups. Nevertheless, police officers have higher AIP and overall CVD risk compared to civilians, creating a necessity for aggressive CVD prevention strategies within the population.
Suggested Reviewers:	Salva Reverentia Yurista Harvard Medical School syurista@mgh.harvard.edu
	Mohammad Saifur Rohman Brawijaya University Faculty of Medicine ippoenk@yahoo.com

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Opposed Reviewers:	
Response to Reviewers:	Author Respond to Reviewer Dear Editor and Reviewer, Thank you for reading and evaluating our manuscript. Here we made some revisions: •Title: we added “Surabaya, East Java, Indonesia” as the place where the study found the place •Abstract: we added more details about location and how the data was collected •Conclusion: we modified our conclusion, according to both groups have high-risk factor •Introduction: we clarify the aim of the study •Method: we added more details about the requirement process, ethical consideration, tools and methods for anthropometrics and blood samples, reference and cut-off value of all parameters, corrected the inclusion criteria •Results: we made some revisions in our results regarding repetitiveness, and added more information about the differences/comparison between two groups •Discussion: we made some revisions in our discussion •Strength and limitation: we provided more strengths and limitation of our study

Dear Editor

Clinical Epidemiology and Global Health

We would like to submit our manuscript entitled *"Higher Cardiovascular Risks and Atherogenic Index of Plasma Found in Police Officers of Developing Country in Surabaya, East Java, Indonesia"* to be considered as publication in Clinical Epidemiology and Global Health

As we know, police officers are known for fieldwork shifts prolonged physical activity, and psychological stress that are associated with cardiovascular disease (CVD). CVD is number one cause of death globally, can be prevented through lifestyle modification and avoiding risk factors. The atherogenic Index of Plasma (AIP) has been widely reported as a strong predictor and biomarker of CVD. We aim to determine the differences in Atherogenic Index of Plasma (AIP) profiles as a predictor of cardiac events and CVD risk factors between police officers and civilians in a developing country as an evaluation and strategic preventive measure for CVD.

In this study, we found that there are significant differences in systolic and diastolic blood pressure, triglycerides, LDL-C, total cholesterol, fasting blood glucose, and the AIP between the police and civilian groups, with the latter showing a tendency of having higher rates. Summary, police officers have higher AIP and overall CVD risk compared to civilians, creating a necessity for aggressive CVD prevention strategies within the population. Early intervention is necessary for CVD prevention.

We declare that this manuscript is original, has not been submitted for publication nor has it been published in whole or in part elsewhere.

No conflicts of interest are associated with this publication, and there has been no significant financial support for this work that could have influenced its outcome.

Thank you for your consideration of this manuscript.

Best Regards,

Dr. Meity Ardiana, M.D., Ph.D.

Author Respond to Reviewer

Dear Editor and Reviewer,

Thank you for reading and evaluating our manuscript.

Here we made some revisions:

- Title: we added “Surabaya, East Java, Indonesia” as the place where the study found the place
- Abstract: we added more details about location and how the data was collected
- Conclusion: we modified our conclusion, according to both groups have high-risk factor
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- Results: we made some revisions in our results regarding repetitiveness, and added more information about the differences/comparison between two groups
- Discussion: we made some revisions in our discussion
- Strength and limitation: we provided more strengths and limitation of our study

Higher Cardiovascular Risks and Atherogenic Index of Plasma Found in Police Officers of Developing Country

Running Title: Cardiovascular Risks in Police Officers

Primasitha Maharany Harsoyo[1], Meity Ardiana*[2,3], Hanestya Oky Hermawan[1], Inna Maya Sufiyah[3], Dwika Rasyid Firmanda[3], Saskia Ratna Desita[4], Annisya Dinda Paramitha[4], Arisvia Sukma Hariftiyani[4], Farah Aisha Shabrina[4], Fita Triastuti

1. Resident, Cardiology and Vascular Medicine, Faculty of Medicine, University of Airlangga, Surabaya, Indonesia
2. Lecturer, Cardiology and Vascular Medicine, Faculty of Medicine, University of Airlangga, Surabaya, Indonesia
3. Medical Doctor, Bhayangkara Hospital, Surabaya, Indonesia
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All authors take responsibility for all aspects of the reliability and freedom from bias of the data presented and their discussed interpretation

Corresponding Author
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Acknowledgment
The authors would like to thank to Bhayangkara Hospital, and colleagues Andrianto, I. G. Rurus Suryawan for their contributions in the making of this paper.

Disclosure statement
The author(s) received no financial support for the research, authorship, and/or publication of this article. The authors have no conflict of interest to declare.

Keywords (5)
Cardiovascular risks, atherogenic index of plasma, police officer, preventive cardiology, atherosclerosis

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Table 1. Frequency and Percentage of Variables in Police and Civilian groups

Variable	Groups	
	Police N=489	Civilian N=489
Sex		
- Women	32 (6.5%)	301 (61.6%)
- Men	457 (93.5%)	188 (38.4%)
Age (years)		
- 26-35	2 (0.4%)	35 (7.2%)
- 36-45	261 (53.4%)	215 (44%)
- 46-55	112 (22.9%)	195 (39.9%)
- >55	114 (23.3%)	44 (9%)
Systolic blood pressure		
- Normal	109 (22.3%)	178 (36.4%)
- Pre-hypertension	232 (47.4%)	237 (48.5%)
- Hypertension stage I	100 (20.4%)	54 (11%)
- Hypertension stage II	48 (9.8%)	20 (4.1%)
Diastolic blood pressure		
- Normal	121 (24.7%)	139 (28.4%)
- Pre-hypertension	224 (45.8%)	235 (48.1%)
- Hypertension stage I	107 (21.9%)	93 (19%)
- Hypertension stage II	37 (7.6%)	22 (4.5%)
BMI		
- Underweight	2 (0.4%)	3 (0.6%)
- Normal	64 (13.1%)	89 (18.2%)
- Overweight	261 (53.4%)	239 (48.9%)
- Obesity	162 (33.1%)	158 (32.3%)

Triglycerides		
- Normal	224 (45.8%)	321 (65.6%)
- High	265 (54.2%)	168 (34.3%)
LDL		
- Normal	91 (18.6%)	92 (18.8%)
- High	398 (81.4%)	397 (81.2%)
HDL		
- Normal	92 (18.8%)	91 (18.6%)
- Low	397 (81.2%)	398 (81.4%)
Total Cholesterol		
- Normal	187 (38.2%)	250 (51.1%)
- High	302 (61.8%)	239 (48.9%)
Fasting blood glucose		
- Normal	382 (78.1%)	420 (85.9%)
- High	107 (21.9%)	69 (14.1%)
AIP		
- Low Risk	8 (1.6%)	17 (3.5%)
- Medium Risk	34 (7%)	66 (13.5%)
- High Risk	447 (91.4%)	406 (83%)

Table 2. Mann Whitney Test analysis results

	Median (Min-Max)	Mean Rank	P
Systolic blood pressure			
- Civilian	120 (90-200)	429.05	0.000
- Police	130 (90-210)	549.95	
Diastolic blood pressure			
- Civilian	80 (70-120)	463.79	0.003
- Police	80 (60-120)	515.21	
BMI			
- Civilian	26.31 (15.7-50.96)	477.29	0.176
- Police	25.97 (17.78-48.83)	501.71	
Triglycerides			
- Civilian	120 (40-1378)	420.87	0.000
- Police	162 (41-980)	558.13	
LDL			
- Civilian	121 (59-280)	464.71	0.006
- Police	125 (43-230)	514.29	
HDL			
- Civilian	47 (29-83)	486.78	0.763
- Police	47 (30-158)	492.22	
Total Cholesterol			
- Civilian	200 (135-392)	447.23	0.000
- Police	216 (105-375)	531.77	
Fasting blood glucose			
- Civilian	92 (64-406)	460.52	0.001
- Police	96 (70-493)	518.48	
AIP			
- Civilian	0.42 (-0.08 – 1.66)	430.44	0.000
- Police	0.55 (-0.11 – 1.36)	548.56	

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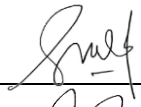
Primasitha Maharany Harsoyo		primasitha.maharany.harsoyo-2020@fk.unair.ac.id	10/04/22
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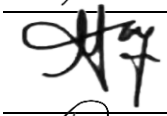
Inna Maya Sufiyah		mayasufiyah@gmail.com	10/04/22
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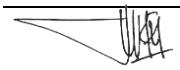
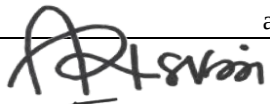
Annisya Dinda Paramitha		annisya.dinda.paramitha-2020@fk.unair.ac.id	10/04/22
Arisvia Sukma Hariftyani		arisvia.sukma.hariftyani-2020@fk.unair.ac.id	10/04/22
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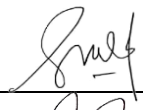
Primasitha Maharany Harsoyo		primasitha.maharany.harsoyo-2020@fk.unair.ac.id	10/04/22
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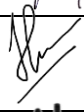
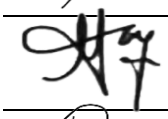
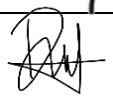
Hanestya Oky Hermawan		hanestya.oky20@fk.unair.ac.id	10/04/22
Inna Maya Sufiyah		mayasufiyah@gmail.com	10/04/22
Dwika Rasyid Firmanda		rraasyd@gmail.com	10/04/22
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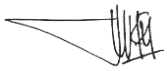
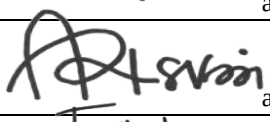
Annisya Dinda Paramitha		annisya.dinda.paramitha-2020@fk.unair.ac.id	10/04/22
Arisvia Sukma Hariftyani		arisvia.sukma.hariftyani-2020@fk.unair.ac.id	10/04/22
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Higher Cardiovascular Risks and Atherogenic Index of Plasma Found in Police Officers of Developing Country in Surabaya, East Java, Indonesia

Running Title: Cardiovascular Risks in Police Officers

1. ABSTRACT

Background: Police officers are known for fieldwork shifts, psychological stress, and prolonged physical activity that are associated with cardiovascular disease (CVD). We aim to determine the differences in CVD risks factor and Atherogenic Index of Plasma (AIP) profiles as a predictor of cardiac events between police officers and civilians in a developing country as an evaluation and strategic preventive measure for CVD.

Methods: 978 participants were enrolled as subjects in this cross-sectional study. Data used were obtained during medical check-ups using complete physical and laboratory examinations including blood pressure, body mass index (BMI), triglycerides (TG), low-density lipoprotein cholesterol (LDL-C), high-density lipoprotein cholesterol (HDL-C), total cholesterol, fasting blood sugar, and AIP between 2019 to 2020 at Bhayangkara State Police Hospital Surabaya. Mann-Whitney U test was performed using IBM SPSS version 25.

Results: There are significant differences in systolic (p=0.000) and diastolic blood pressure (p=0.003), triglycerides (p=0.000), LDL-C (p=0.006), total cholesterol (p=0.000), fasting blood glucose (p=0.001), and the AIP (p=0.000) between the police and civilian groups, with the latter showing a tendency of having higher rates.

Conclusions: CVD risk was found in both groups. Nevertheless, police officers have higher AIP and overall CVD risk compared to civilians, creating a necessity for aggressive CVD prevention strategies within the population.

Keywords: Cardiovascular risks, atherogenic index of plasma, police officer, preventive cardiology, atherosclerosis

2. INTRODUCTION

Cardiovascular disease (CVD) is a concerning non-communicable disease due to its mortality rate[1]. CVD is the number one cause of death globally according to WHO, reaching 17.9 million in 2019 and is predicted to increase by 2030[2]. The global prevalence of CVD has nearly doubled from 271 million in 1990 to 523 million in 2019[3]. In Indonesia, the number of CVD sufferers reached 1,017,290 in 2018[4], with the fourth-highest number of deaths worldwide due to CVD[3].

CVD can be prevented through lifestyle modification and avoiding risk factors such as hypertension, smoking, obesity, unhealthy diet, lack of physical activity, increased fasting blood sugar, and dyslipidemia. Dyslipidemia is an increase in total cholesterol, low-density lipoprotein cholesterol (LDL-C), triglycerides (TG) followed by a decrease in high-density lipoprotein cholesterol (HDL-C)[5,6]. Although therapies for heart disease have developed rapidly, lifestyle modification and risk management play an essential role in reducing CVD incidence. Maharani et al., 2019 stated that Indonesian adults had a high-risk CVD but low preventive treatment[7]. A cohort study of a good lifestyle reduced by 40% the relative occurrence of CVD[8]. In the US, a national lifestyle change program was associated with a lower CVD incidence[9].

The atherogenic Index of Plasma (AIP) has been widely reported as a strong predictor and biomarker of CVD. AIP, calculated with log (TG/HDL-C), has been used to measure blood lipids and an optimal indicator of dyslipidemia and CVD[10]. Another study stated that AIP is also a strong predictor of CVD in postmenopausal women[11]. An Iran study stated that AIP is closely related to physical activity and body mass index[12]. Moreover, A Chinese Population Study found that AIP was closely related to coronary artery disease[13]. Increased triglycerides and total cholesterol cause vasoconstriction and endothelial dysfunction in coronary arteries, thereby increasing the risk of coronary artery disease[14]. AIP strongly correlates with carotid intima wall thickening[15]. Meta-analysis states that lipid profile predicts cardiovascular outcome and mortality[16].

Police officers are known for fieldwork shifts and prolonged physical activity. Job-specific risk factors are associated with sudden physical activity, psychological stress, and long work shifts[17]. Long working hours disrupt circadian rhythms, increasing cortisol. Chronic increases in the hormone cortisol cause hypertension, impaired vascular remodeling, increased TG, and insulin resistance which are risk factors for CVD. In addition, psychological stress leads to oxidative stress which causes vascular endothelial damage. Furthermore, stress also increases sympathetic nerves, releasing catecholamine hormones, increasing blood pressure and heart rate, and inflammatory cytokine response that causes CVD[18]. In vivo studies suggest that chronic stress mice have an increased immune response that exacerbates arterial inflammation with unstable plaque[19]. According to a study in the US, stressful police work is associated with the risk of sudden cardiac death, especially during an emergency, compared to non-emergency[20]. Therefore, the authors aim to determine the differences in CVD risks factor and Atherogenic Index of Plasma (AIP) profiles as a predictor of cardiac

events between police officers and civilians in a developing country as an evaluation and strategic preventive measure for CVD.

3. METHODS

489 police officers and 489 civilians were enrolled as participants in this cross-sectional study. All participants have given their informed consent and ethics for this study was approved by the Bhayangkara State Police Hospital ethics committee with decision number 10/IV/2021/KEPK/RUMKIT on April 7, 2021. Data used in this study was simultaneously obtained during medical check-ups between 2019 to 2020 at Bhayangkara State Police Hospital Surabaya.

All study samples met the inclusion criteria, namely 1) being an active field police officer (for police groups) and not working as field police officers (for civilian groups), 2) having completed the entire process of examination, 3) aged 21 or older, and 4) consented to being participants of study.

Independent variables examined in this study are blood pressure, BMI, TG, LDL-C, HDL-C, total cholesterol, fasting blood sugar, and atherogenic index plasma. Baseline characteristics including age and sex were recorded by interview and cross-checking with medical record.

Blood pressure measurements were carried out in a sitting position with the hands resting on the examination table and the cubital fossa at the same level as the heart. The measurements were taken after the patient had rested for 5 minutes, and repeated for the next 15 minutes. A digital blood pressure meter (model: HEM-8172, Omron Healthcare Co., Ltd., Kyoto, Japan) was used. The cut off value of blood pressure in this study refers to ESC 2018 guideline with the following criteria: normal systolic

blood pressure <120 mmHg and diastolic blood pressure <80 mmHg; prehypertension 120-139 mmHg for systolic blood pressure and 80-89 mmHg for diastolic blood pressure; stage I hypertension 140-159 mmHg for systolic blood pressure and 90-99 mmHg for diastolic blood pressure; and stage II hypertension ≥ 160 mmHg for systolic blood pressure and ≥ 100 mmHg for diastolic blood pressure.

Measurements of weight and height were carried out to find BMI (body mass index). BMI measurement used in this study refers to the WHO criteria measuring weight (kg) divided by (height)2 (m2), resulting <18.5 classified as Underweight; 18.5-24.9 as Normal Weight; 25.0-29.9 as Overweight, and >30.0 as Obese. We used a mechanical weight scale (model: SMIC ZT-120, Gea Medical, Jakarta, Indonesia) for weight measurement. Height was measured by standing straight on the weight scale, barefooted, with the head facing straight ahead.

Dyslipidemia according to American Heart Association criteria is an increase in total cholesterol > 200 mg/dl, LDL-C > 130 mg/dl, TG > 150 mg/dl followed by a decrease in HDL-C < 40 mg/dl. AIP was calculated with log (TG/HDL-C), resulting -0.3-0.1 as low risk, 0.1-0.24 as moderate risk, and > 0.24 as high-risk occurrence of cardiovascular disease. Fasting blood sugar cut off value was categorized as < 6.1 mmol/L as normal and > 6.1 mmol/L as high. Blood samples were collected after overnight (8h) fasting and performed in the laboratory.

4. STATISTICAL ANALYSIS

Statistical tests using SPSS version 25. All variables were tested for normality using Kolmogorov-Smirnov and Shapiro-Wilk. Abnormal distributions are shown as mean and compared with the Mann-Whitney rank-sum test. Variables were then processed using the Mann-Whitney and Wilcoxon methods. Comparative analysis to determine

AIP and CVD risk in Police Officers and Civilian groups was carried out using the Mann-Whitney test.

5. RESULTS

978 participants were obtained, consisting of 489 police and 489 civilians. The participants were predominantly male with a mean age of 45.95 ± 7.42. Nearly half of the participants appear in the prehypertension group. More than 70% of the participants were overweight and obese with a mean BMI of 26.34 ± 3.86. High total cholesterol, high LDL, low HDL, and a high-risk score of AIP are primarily found. In contrast, the majority of the participants have normal fasting blood glucose and normal TG. More details about the participants are presented in Table 1.

For comparison between police and civilian groups, the police group was predominantly by male while women were dominant in civilian groups. There is a significant difference in systolic and diastolic blood pressure, TG, LDL, total cholesterol, fasting blood glucose, and AIP with $p < 0.05$. Police tend to have higher results in those significant factors compared to civilian groups. However, there is no significant difference in BMI and HDL-C between police and civilian groups (Table 2).

6. DISCUSSION

This study found that nearly half of the subjects had prehypertension, in the police and civilian groups. A study in Brazil reported that hypertension was the most common risk factor for CVD overall in both men and women. However, in each gender itself, prehypertension is mostly found in men (43.8%), while in women, normal blood pressure is mostly found (43.2%)[21]. Our study showed a significant difference in systolic blood pressure (p=0.000) and diastolic blood pressure (p=0.003)

between police and civilians. Police tend to have a high-stress work environment that leads to hypertension. A cohort study shows perceived stress and plasma oxidative stress is associated with hypertension in police officers[22]. In addition, a previous study stated that many police officers who worked for more than 6 years had hypertension, due to lack of activity outside of working hours[23].

BMI is correlated to CVD risk. In a group of farmers in Brazil, overweight farmers tend to have CVD[21]. A study in military police stated that more than a half police have obesity[22]. Study in the US stated that police tend to have obesity compared to the general population[23]. There was no significant difference in BMI between police and civilians in this study. This is because many factors affect BMI, such as lack of sleep, length of works, and lifestyle[24]. According to a study in Brazil, there was no relationship between BMI in police officers who worked 6 hours/day with 24 hours/day[25]

Dyslipidemia is an increase in total cholesterol, LDL-C, TG followed by a decrease in HDL-C[26]. This study showed significant differences in total cholesterol, LDL-C, and TG between police and civilian groups ($p < 0.05$). In the police group, most of them had high total cholesterol (61.8%) and TG (54.2%). This was in contrast to the civilian group, which had normal total cholesterol (51.1%) and TG (65.6%). Police officers with a stressful environment and work level are at risk of high pressure tend to be at risk of dyslipidemia. Previous research showed an association between stress levels and hypertriglyceridemia in police officers[27]. This is supported by a study in Genoa that states a relationship exists between stress levels and increases in triglycerides and total cholesterol in police officers[28].

The prevalence of high fasting blood sugar was found in 21.9% in the police group and 14.1% in the non-police group. There was a significant difference in fasting blood sugar between the police and non-police groups ($p = 0.001$). A study in Ethiopia stated that high-ranking police officers were more at risk of developing diabetes mellitus than low-ranking police officers (AOR = 3.8, 95% CI, 1.1–13.7)[29]. This is because high-ranking police officers tend to have a higher stress burden, thereby increasing the risk of developing diabetes mellitus. Psychological stress leads to oxidative stress, thereby triggering insulin resistance[18]. Studies in India found that police officers were more likely to have impaired fasting glucose than other workers[30]. Another study in the military police population of Bahia, Brazil stated that 28.1% had impaired fasting glucose[31].

AIP is an index consisting of TG and HDL-C and is a strong predictor of CVD and can be used as an alternative screening if all atherogenic parameters have normal results[10]. In this study, 91.4% of the police group were classified as high-risk groups. There is a significant difference in AIP between the police and civilian groups. Police tend to have hypertriglyceridemia, low HDL-C, and high total cholesterol increasing CVD incidence. In addition, AIP showed an association between protective and atherogenic lipoproteins used to predict CVD[32].

This study shows significant differences in systolic blood pressure, diastolic blood pressure, TG, fasting blood glucose, and AIP between police and civilian groups. Studies in India show that police tend to have a high risk of CVD. In addition, a previous study stated the police have a risk for metabolic syndrome[23]. Moreover, another study showed that operational police had a higher cardiovascular risk compared to non-operational police[33]. This is slightly different in the study by Strauss

et al., 2020 which stated that there were no significant differences in HDL-C, TG, blood pressure, and BMI between female police officers and office workers[34].

7. STUDY LIMITATION

This study is of a relatively small sample size. The smoking habits, stress factor, and complete history of illness of subjects were not recorded. Furthermore, testings such as electrocardiogram, echocardiography, or CT-A calcium score may provide further valuable information. A cohort study design is recommended for future in order to describe risks factor of the disease.

8. CONCLUSION

CVD risk was found in both groups. Nevertheless, police officers have higher AIP and overall CVD risk compared to civilians, creating a necessity for aggressive CVD prevention strategies within the population. Early intervention is necessary for CVD prevention.

9. ACKNOWLEDGEMENT

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10. CONFLICT OF INTEREST

The Authors have no conflict of interest

REFERENCES

1. Budreviciute A, Damiati S, Sabir DK, et al. Management and Prevention Strategies for Non-communicable Diseases (NCDs) and Their Risk Factors. *Frontiers in Public Health*. 2020;8. doi:10.3389/fpubh.2020.574111

2. World Health Organization. WHO methods and data sources for global burden disease estimates 2000-2019. Geneva. Published 2020. Accessed December 20, 2021.

https://www.who.int/data/gho/data/themes/mortality-and-global-health-estimates/ghe-leading-causes-of-death

3. Roth GA, Mensah GA, Johnson CO, et al. Global Burden of Cardiovascular Diseases and Risk Factors, 1990–2019. *J Am Coll Cardiol*. 2020;76(25):2982-3021. doi:10.1016/j.jacc.2020.11.010

4. Ministry of Health of the Republic of Indonesia. *Hasil Utama Riskesdas 2018*.; 2018. Accessed December 20, 2021. https://kesmas.kemkes.go.id/assets/upload/dir_519d41d8cd98f00/files/Hasil-riskesdas-2018_1274.pdf

5. Wang MC, Lloyd-Jones DM. Cardiovascular Risk Assessment in Hypertensive Patients. *American Journal of Hypertension*. 2021;34(6):569-577. doi:10.1093/ajh/hpab021

6. Gallucci G, Tartarone A, Lerose R, Lalinga AV, Capobianco AM. Cardiovascular risk of smoking and benefits of smoking cessation. *Journal of Thoracic Disease*. 2020;12(7):3866-3876. doi:10.21037/jtd.2020.02.47

7. Maharani A, Sujarwoto, Praveen D, Oceandy D, Tampubolon G, Patel A. Cardiovascular disease risk factor prevalence and estimated 10-year cardiovascular risk scores in Indonesia: The SMARThealth Extend study. *PLOS ONE*. 2019;14(4):e0215219. doi:10.1371/journal.pone.0215219

8. Dimovski K, Orho-Melander M, Drake I. A favorable lifestyle lowers the risk of coronary artery disease consistently across strata of non-modifiable risk factors in a population-based cohort. *BMC Public Health*. 2019;19(1):1575. doi:10.1186/s12889-019-7948-x

9. Jackson SL, Safo S, Staimez LR, et al. Reduced Cardiovascular Disease Incidence With a National Lifestyle Change Program. *American Journal of Preventive Medicine*. 2017;52(4):459-468. doi:10.1016/j.amepre.2016.10.013

10. Sami M, Karbala K, Med J, Khazaál M. Atherogenic index of plasma … Atherogenic index of plasma (AIP) as a parameter in predicting cardiovascular risk in males compared to the conventional dyslipidemic indices (cholesterol ratios). 2014;6.

11. Wu TT, Gao Y, Zheng YY, Ma YT, Xie X. Atherogenic index of plasma (AIP): a novel predictive indicator for the coronary artery disease in postmenopausal women. *Lipids in Health and Disease*. 2018;17(1):197. doi:10.1186/s12944-018-0828-z

12. Hamzeh B, Pasdar Y, Mirzaei N, et al. Visceral adiposity index and atherogenic index of plasma as useful predictors of risk of cardiovascular diseases: evidence from a cohort study in Iran. *Lipids in Health and Disease*. 2021;20(1):82. doi:10.1186/s12944-021-01505-w

13. Cai G, Shi G, Xue S, Lu W. The atherogenic index of plasma is a strong and independent predictor for coronary artery disease in the Chinese Han population. *Medicine*. 2017;96(37):e8058. doi:10.1097/MD.0000000000008058

14. Peng J, Luo F, Ruan G, Peng R, Li X. Hypertriglyceridemia and atherosclerosis. *Lipids in Health and Disease*. 2017;16(1):233. doi:10.1186/s12944-017-0625-0

15. Icli A, Cure E, Uslu AU, et al. The Relationship Between Atherogenic Index and Carotid Artery Atherosclerosis in Familial Mediterranean Fever. *Angiology*. 2017;68(4):315-321. doi:10.1177/0003319716659220

16. Zhao X, Wang D, Qin L. Lipid profile and prognosis in patients with coronary heart disease: a meta-analysis of prospective cohort studies. *BMC Cardiovascular Disorders*. 2021;21(1):69. doi:10.1186/s12872-020-01835-0

17. Violanti JM, Charles LE, McCanlies E, et al. Police stressors and health: a state-of-the-art review. *Policing*. 2017;40(4):642-656. doi:10.1108/PIJPSM-06-2016-0097

18. Dar T, Radfar A, Abohashem S, Pitman RK, Tawakol A, Osborne MT. Psychosocial Stress and Cardiovascular Disease. *Current Treatment Options in Cardiovascular Medicine*. 2019;21(5):23. doi:10.1007/s11936-019-0724-5

19. Heidt T, Sager HB, Courties G, et al. Chronic variable stress activates hematopoietic stem cells. *Nature Medicine*. 2014;20(7):754-758. doi:10.1038/nm.3589

20. Varvarigou V, Farioli A, Korre M, Sato S, Dahabreh IJ, Kales SN. Law enforcement duties and sudden cardiac death among police officers in United States: case distribution study. *BMJ*. 2014;349(nov18 2):g6534-g6534. doi:10.1136/bmj.g6534

21. Luz TC da, Cattafesta M, Petarli GB, et al. Fatores de risco cardiovascular em uma população rural brasileira. *Ciência & Saúde Coletiva*. 2020;25(10):3921-3932. doi:10.1590/1413-812320202510.36022018

22. Vancini RL, de Lira CAB, Anceschi SA, et al. Anxiety, depression symptoms, and physical activity levels of eutrophic and excess-weight Brazilian elite police officers: a preliminary study. *Psychology Research and Behavior Management*. 2018;Volume 11:589-595. doi:10.2147/PRBM.S186128

23. Hartley TA, Burchfiel CM, Fekedulegn D, Andrew ME, Knox SS, Violanti JM. Associations between police officer stress and the metabolic syndrome. *Int J Emerg Ment Health*. 2011;13(4):243-256.

24. Štefan L, Čule M, Milinović I, Juranko D, Sporiš G. The Relationship between Lifestyle Factors and Body Compositionin Young Adults. *International Journal of Environmental Research and Public Health*. 2017;14(8):893. doi:10.3390/ijerph14080893

25. Silva CAC da, Leite AL, Moreira JA, et al. Association of dyslipidemia, hypertension and overweight/obesity with work shift and duration of employment among police officers in a small town in Northeastern Brazil. *Revista Brasileira de Medicina do Trabalho*. 2019;17(4):537-544. doi:10.5327/Z1679443520190401

26. Lin CF, Chang YH, Chien SC, Lin YH, Yeh HY. Epidemiology of Dyslipidemia in the Asia Pacific Region. *International Journal of Gerontology*. 2018;12(1):2-6. doi:10.1016/j.ijge.2018.02.010

27. Garbarino S, Magnavita N. Work Stress and Metabolic Syndrome in Police Officers. A Prospective Study. *PLOS ONE*. 2015;10(12):e0144318. doi:10.1371/journal.pone.0144318

28. Chen X, Leng L, Yu H, et al. Psychological Distress and Dyslipidemia in Chinese Police Officers. *Journal of Occupational & Environmental Medicine*. 2015;57(4):400-405. doi:10.1097/JOM.0000000000000372

29. Tesfaye T, Shikur B, Shimels T, Firdu N. Prevalence and factors associated with diabetes mellitus and impaired fasting glucose level among members of federal police commission residing in Addis Ababa, Ethiopia. *BMC Endocrine Disorders*. 2016;16(1):68. doi:10.1186/s12902-016-0150-6

30. Mallik D, Mahapatra B, Chakrabarti P, Mukhopadhyay D, Sinhababu A, Kumar P. Prevalence of diabetes mellitus, impaired fasting glucose, impaired glucose tolerance, and its correlates among police personnel in Bankura district of west Bengal. *Indian Journal of Public Health*. 2013;57(1):24. doi:10.4103/0019-557X.111364

31. Filho RTB, D'Oliveira A. The Prevalence of Metabolic Syndrome Among Soldiers of the Military Police of Bahia State, Brazil. *American Journal of Men's Health*. 2014;8(4):310-315. doi:10.1177/1557988313510928

32. Niroumand S, Khajedaluee M, Khadem-Rezaiyan M, et al. Atherogenic Index of Plasma (AIP): A marker of cardiovascular disease. *Med J Islam Repub Iran*. 2015;29:240.

33. Yates JD, Aldous JWF, Bailey DP, Chater AM, Mitchell ACS, Richards JC. The Prevalence and Predictors of Hypertension and the Metabolic Syndrome in Police Personnel. *International Journal of Environmental Research and Public Health*. 2021;18(13):6728. doi:10.3390/ijerph18136728

34. Strauss M, Foshag P, Brzęk A, et al. Cardiorespiratory Fitness Is Associated with a Reduced Cardiovascular Risk in Occupational Groups with Different Working Conditions: A Cross-Sectional Study among Police Officers and Office Workers. *Journal of Clinical Medicine*. 2021;10(9):2025. doi:10.3390/jcm10092025