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Lampiran 1. FORMULIR PERSETUJUAN SETELAH PENJELASAN (PSP) (INFORMED CONSENT)



KEMENTERIAN PENDIDIKAN, KEBUDAYAAN, RISET DAN TEKNOLOGI
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RSPTN UNIVERSITAS HASANUDDIN
RSUP Dr. WAHIDIN SUDIROHUSODO MAKASSAR
Sekretariat : Lantai 2 Gedung Laboratorium Terpadu
JL.PERINTIS KEMERDEKAAN KAMPUS TAMALANREA KM.10 MAKASSAR 90245.



Contact Person: dr. Agussalim Bukhari.,MMed,PhD, SpGK TELP. 081241850858, 0411 5780103, Fax : 0411-581431

FORMULIR PERSETUJUAN SETELAH PENJELASAN (PSP) (INFORMED CONSENT)

Selamat pagi Bapak / Ibu /Saudara(i), saya **Wahyu Usman**, bermaksud untuk melakukan penelitian **PENGARUH LATIHAN MALAM TERHADAP KADAR MALONDIALDEHID, INTERLEUKIN-6, DAN CREATINE KINASE PADA ATLET BULUTANGKIS DI KOTA MAKASSAR**

Penelitian ini dilaksanakan sebagai sarana pengembangan ilmu pengetahuan dan penelitian dibidang fisiologi olahraga. Penelitian ini diharapkan dapat bermanfaat untuk memberi informasi kepada para atlet, coach dan masyarakat umum terkait pengaruh pemilihan waktu untuk berolahraga terkhusus latihan yang dilakukan di malam hari terhadap tubuh yang menyebabkan terjadinya peningkatan kadar oksidan dalam tubuh yang memicu terjadinya inflamasi dan kerusakan otot.

Pemilihan sampel dalam penelitian eksperimental ini dengan menggunakan teknik *purposive sampling*, yaitu teknik pengambilan sampel yang didasarkan pada suatu pertimbangan tertentu yang dibuat oleh peneliti berdasarkan ciri atau sifat-sifat populasi yang sudah diketahui sebelumnya yaitu atlet badminton junior usia 10-17 tahun. Dalam penelitian ini dibutuhkan 21 atlet bulutangkis yang berlatih di malam hari.

Atlet badminton junior yang memenuhi kriteria inklusi dalam penelitian ini, sebelumnya dilakukan pemeriksaan fisik pada atlet berupa pengukuran berat badan, tinggi badan dan indeks massa tubuh (IMT). Kemudian responden akan olahraga bulutangkis di malam pada pukul 17.00-21.00 WITA sesuai dengan prosedur yang telah ditetapkan. Peneliti juga melakukan pengukuran tanda vital yaitu tekanan darah, denyut nadi, dan suhu tubuh selanjutnya dilakukan pengambilan sampel darah sebanyak 3 cc yang dilakukan 15 menit sebelum dan sesudah berolahraga malam hari untuk kemudian sampel darah tersebut dianalisis menggunakan ELISA kit dan spektrofotometri untuk dianalisis kadar Malondialdehid (MDA), Interleukin-6 (IL-6), dan Creatin Kinase.

Adapun kriteria inklusi pada penelitian ini adalah atlet badminton junior, berusia 10-17 tahun, menandatangani informed consent untuk mengikuti penelitian hingga selesai, rutin melakukan latihan malam minimal 2x seminggu, memiliki body mass index (BMI) antara 18,5-24,9 kg/m² (BMI normal), tidak memiliki riwayat penyakit kardiovaskular, tidak minum alcohol, tidak memiliki riwayat penyakit kronik, tidak ada gangguan psikis. Sedangkan kriteria eksklusi yaitu tidak bisa melanjutkan prosedur penelitian dan mengkonsumsi obat-obatan (steroid, narkotika dan obat-obatan terlarang). Serta, Kriteria Dropout dalam penelitian ini yaitu tidak mengikuti sesi latihan bulutangkis sampai akhir waktu yang telah ditetapkan dan atlet tidak hadir saat pengambilan sampel darah dilakukan.

Partisipan dalam penelitian ini bersifat sukarela dan dapat mengundurkan diri atau menolak untuk berpartisipasi tanpa mengurangi hak mendapatkan pelayanan kesehatan. Jikalau responden bersedia menjadi sampel penelitian, maka sampel harus mengikuti proses penelitian dengan mengikuti prosedur penelitian sampai selesai.

Pengambilan sampel darah dalam penelitian ini dilakukan 2x sebanyak 3 cc sebelum dan sesudah latihan. Pengambilan sampel darah dilakukan oleh analis pada vena mediana kubiti (lipatan siku) untuk kemudian dilakukan analisis kadar MDA untuk melihat kadar oksidan, Creatin Kinase untuk melihat reaksi kerusakan otot dan IL-6 digunakan untuk melihat reaksi inflamasi pasca olahraga Hal yang kurang nyaman atau mengganggu saat pengambilan sampel darah pada atlet junior berupa nyeri dan sedikit bengkak di area suntikan tapi hal ini dilakukan oleh analis yang profesional sehingga bisa meminimalisir rasa tidak nyaman yang kemungkinan dirasakan oleh responden.

Biaya yang dikeluarkan selama penelitian berjumlah Rp 15.450.000,00 dengan rincian berupa pembelian elisa kit Rp. 8.150.000,00, pemeriksaan creatin kinase dan malondealdehyde (MDA) Rp.4.400.000,00, tim analis laboratorium Rp. 600.000,00, Bahan habis pakai laboratorium Rp. 800.000,00, Transportasi Analis, peneliti dan responden Rp 1.000.000,00 dan Biaya lainnya (ATK, Print, dll) Rp 500.000,00.

Peneliti bertanggungjawab terhadap dampak yang ditimbulkan oleh prosedur medis yang dilakukan dalam penelitian. Prosedur medis yang dilakukan pada penelitian ini adalah prosedur standar yang beresiko sangat rendah. Tetapi bila terjadi dampak medis sebagai akibat langsung dari prosedur penelitian, tenaga medis untuk merujuk sampai dalam keadaan darurat telah disediakan untuk mengantisipasi dampak yang tidak diinginkan, dan peneliti akan menanggung segala kerugiannya termasuk bertanggung jawab terhadap tindakan selanjutnya.

Pemberian kompensasi kepada partisipan berupa pemberian souvenir dan konsumsi yang diberikan setelah kegiatan penelitian selesai.

Untuk menjaga kerahasiaan data penelitian, maka seluruh data yang dikumpulkan yang menyangkut informasi pasien akan dirahasiakan dalam penelitian ini dan akan disimpan dalam dokumen pribadi yang dimana hanya dapat diakses oleh peneliti. Jika ada hal yang ingin ditanyakan mengenai penelitian ini dapat menghubungi peneliti dengan alamat dan nomor kontak di bawah ini.

Identitas Peneliti

Nama : Wahyu Usman
Alamat : Jl.Tinumbu Lr.149 No.179
No Hp : 088-245-257-453

Lampiran 2. Formulir Persetujuan Setelah Penjelasan



KEMENTERIAN PENDIDIKAN, KEBUDAYAAN, RISET DAN TEKNOLOGI
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RSPTN UNIVERSITAS HASANUDDIN
RSUP Dr. WAHIDIN SUDIROHUSODO MAKASSAR



Sekretariat : Lantai 2 Gedung Laboratorium Terpadu
JL.PERINTIS KEMERDEKAAN KAMPUS TAMALANREA KM.10 MAKASSAR 90245.

Contact Person: dr. Agussalim Bukhari.,MMed,PhD, SpGK TELP. 081241850858, 0411 5780103, Fax : 0411-581431

FORMULIR PERSETUJUAN SETELAH PENJELASAN

Saya yang bertandatangan di bawah ini :

Nama :
Umur :
Masa Kerja :
Satuan :
Alamat :

setelah mendengar/membaca dan mengerti penjelasan yang diberikan mengenai tujuan, manfaat, dan apa yang akan dilakukan pada penelitian ini, menyatakan setuju untuk ikut dalam penelitian ini secara sukarela tanpa paksaan.

Saya tahu bahwa keikutsertaan saya ini bersifat sukarela tanpa paksaan, sehingga saya bisa menolak ikut atau mengundurkan diri dari penelitian ini. Saya berhak bertanya atau meminta penjelasan pada peneliti bila masih ada hal yang belum jelas atau masih ada hal yang ingin saya ketahui tentang penelitian ini.

Saya juga mengerti bahwa semua biaya yang dikeluarkan sehubungan dengan penelitian ini, akan ditanggung oleh peneliti. Saya percaya bahwa keamanan dan kerahasiaan data penelitian akan terjamin dan saya dengan ini menyetujui semua data saya yang dihasilkan pada penelitian ini untuk disajikan dalam bentuk lisan maupun tulisan.

Dengan membubuhkan tandatangan saya di bawah ini, saya menegaskan keikutsertaan saya secara sukarela dalam studi penelitian ini.

Nama	Tanda tangan	Tgl/Bln/Thn
Subyek/Wali
Saksi

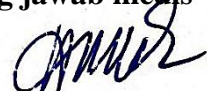
(Tanda Tangan Saksi diperlukan hanya jika Partisipan tidak dapat memberikan consent/persetujuan sehingga menggunakan wali yang sah secara hukum, yaitu untuk partisipan berikut:

1. Berusia di bawah 18 tahun
2. Usia lanjut
3. Gangguan mental
4. Pasien tidak sadar
5. Dan lain-lain kondisi yang tidak memungkinkan memberikan persetujuan

Penanggung jawab penelitian :

Nama : Wahyu Usman
Alamat : Jl Tinumbu, Lr.149 no179
Tlp : 088245257453

Penanggung jawab medis


dr. Andi Ariyandy Ph.D
Ketua departemen Ilmu Fisiologi
Hp : 085240432085
Alamat : Royal Sentraland BTP

d19/17

Lampiran 3. Anamnesis dan Pemeriksaan Fisik Responden Penelitian

ANAMNESIS DAN PEMERIKSAAN FISIK RESPONDEN PENELITIAN

1. Data Responden

Nama :
Umur :
Jenis Kelamin :
Pekerjaan :
No. Hp./Telp. :

2. Pemeriksaan Fisik

a. Berat badan :
b. Tinggi badan :
c. Riwayat Kesehatan :
d. Riwayat konsumsi obat :

KUESIONER PENELITIAN
KUESIONER TENTANG KARAKTERISTIK RESPONDEN

Kode Petunjuk Pengisian:

1. Mohon kesediaan Saudara untuk mengisi kuesioner ini sesuai dengan kondisi yang sebenarnya, dengan cara memberi tanda (\surd) pada jawaban yang telah disediakan.
2. Semua pertanyaan/pernyataan sedapat mungkin diisi secara jujur dan lengkap.
3. Bila ada pertanyaan/pernyataan yang kurang dipahami, kami mohon Saudara menanyakan langsung kepada peneliti.
4. Atas partisipasi Saudara kami mengucapkan banyak terima kasih.

Karakteristik Responden

1. Nama :
2. Umur : tahun
3. Berat Badan : kg
4. Tinggi badan : cm
5. Indeks Massa Tubuh : Kg/m²
6. Tekanan darah : mmHg
7. Denyut nadi : beats/menit
8. Frekuensi pernapasan : beats/menit

Lampiran 4. Hasil Uji SPSS

1. MDA

a. Uji Deskriptif nilai kadar MDA Pre dan Post Exercise

		Descriptives		
		Statistic	Std. Error	
Pre Exercise MDA	Mean	.7664	.12545	
	95% Confidence Interval for Mean	Lower Bound	.5055	
		Upper Bound	1.0273	
	5% Trimmed Mean	.7148		
	Median	.5450		
	Variance	.346		
	Std. Deviation	.58842		
	Minimum	.19		
	Maximum	2.30		
	Range	2.11		
	Interquartile Range	.85		
	Skewness	1.224	.491	
	Kurtosis	.992	.953	
	Post Exercise MDA	Mean	2.1755	.20369
95% Confidence Interval for Mean		Lower Bound	1.7519	
		Upper Bound	2.5991	
5% Trimmed Mean		2.1208		
Median		2.0800		
Variance		.913		
Std. Deviation		.95540		
Minimum		.74		
Maximum		4.57		
Range		3.83		
Interquartile Range		1.20		
Skewness		1.177	.491	
Kurtosis		1.811	.953	

b. Uji Normalitas

	Tests of Normality					
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pre Exercise MDA	.176	22	.074	.861	22	.005
Post Exercise MDA	.177	22	.071	.892	22	.021

a. Lilliefors Significance Correction

c. Uji Statistik dengan menggunakan Uji Wilcoxon

Test Statistics^a

	Post Exercise MDA - Pre Exercise MDA
Z	-4.107 ^b
Asymp. Sig. (2-tailed)	.000

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

2. IL-6

a. Uji Deskriptif nilai kadar IL-6 Pre dan Post Exercise

Descriptives

		Statistic	Std. Error
Pre Exercise IL-6	Mean	1.4301	.11196
	95% Confidence Interval for Lower Bound Mean	1.1973	
		Upper Bound	1.6630
	5% Trimmed Mean	1.3927	
	Median	1.3455	
	Variance	.276	
	Std. Deviation	.52516	
	Minimum	.70	
	Maximum	2.90	
	Range	2.21	
	Interquartile Range	.78	
	Skewness	.965	.491
	Kurtosis	1.471	.953
	Post Exercise IL-6	Mean	3.3755
95% Confidence Interval for Lower Bound Mean		2.2809	
		Upper Bound	4.4702
5% Trimmed Mean		3.0449	
Median		2.7190	
Variance		6.096	
Std. Deviation		2.46891	
Minimum		1.05	
Maximum		12.10	
Range		11.04	
Interquartile Range		2.68	
Skewness		2.317	.491

Kurtosis	6.856	.953
----------	-------	------

b. Uji normalitas

Tests of Normality						
	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pre Exercise IL-6	.096	22	.200*	.942	22	.218
Post Exercise IL-6	.178	22	.067	.767	22	.000

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

c. Uji Statistik dengan menggunakan Uji Wilcoxon

Test Statistics ^a	
	Post Exercise IL-6 - Pre Exercise IL-6
Z	-3.393 ^b
Asymp. Sig. (2-tailed)	.001

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

3. CK

a. Uji Deskriptif nilai kadar CK Pre dan Post Exercise

			Descriptives		
			Statistic	Std. Error	
Pre	Exercise	Creatine	Mean	165.23	4.314
Kinase			95% Confidence Interval for Lower Bound	156.26	
			Mean Upper Bound	174.20	
			5% Trimmed Mean	164.87	
			Median	163.00	
			Variance	409.422	
			Std. Deviation	20.234	
			Minimum	120	
			Maximum	218	
			Range	98	
			Interquartile Range	22	
			Skewness	.240	.491
			Kurtosis	1.581	.953
			Mean	176.50	7.008

Post Exercise Creatine Kinase	95% Confidence Interval for Mean	Lower Bound	161.93	
		Upper Bound	191.07	
	5% Trimmed Mean		174.56	
	Median		174.00	
	Variance		1080.548	
	Std. Deviation		32.872	
	Minimum		120	
	Maximum		272	
	Range		152	
	Interquartile Range		36	
	Skewness		.930	.491
	Kurtosis		2.668	.953

b. Uji Normalitas

Tests of Normality

	Kolmogorov-Smirnov ^a			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
Pre Exercise Creatine Kinase	.150	22	.200*	.949	22	.305
Post Exercise Creatine Kinase	.171	22	.095	.908	22	.042

*. This is a lower bound of the true significance.

a. Lilliefors Significance Correction

c. Uji Statistik dengan menggunakan Uji Wilcoxon

Test Statistics^a

	Post Exercise Creatine Kinase - Pre Exercise Creatine Kinase
Z	-2.107 ^b
Asymp. Sig. (2-tailed)	.035

a. Wilcoxon Signed Ranks Test

b. Based on negative ranks.

Lampiran 5. Surat Keterangan Selesai Penelitian



KEMENTERIAN PENDIDIKAN, KEBUDAYAAN,
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RUMAH SAKIT UNHAS

Jl. Perintis Kemerdekaan Km. 10 Tamalanrea, Makassar 90245

Website www.rs.unhas.ac.id Email info@rs.unhas.ac.id Telp (0411) 591331 Fax: (0411) 591332

Nomor : 6812/UN4.24.1.1/PT.01.05/2023 19 Mei 2023
Hal : Surat Keterangan Selesai Penelitian

Dengan ini menerangkan bahwa mahasiswa yang beridentitas :

Nama : Wahyu Usman
NIM : P062212031
Institusi : Universitas Hasanuddin, Makassar
Kode Penelitian : 230515_3

Telah menyelesaikan penelitian di Rumah Sakit Unhas.

Terhitung pada tanggal : 19 Mei 2023

Dengan Sampel : Data Primer: Elisa

Dalam rangka penyusunan Tesis yang berjudul:

**"PENGARUH LATIHAN MALAM TERHADAP KADAR MALONDIALDEHID, INTERLEUKIN-6,
DAN CREATINE KINASE PADA ATLET BULUTANGKIS DI KOTA MAKASSAR "**

Demikian surat keterangan ini dibuat dan diberikan kepada yang bersangkutan untuk
dipergunakan seperlunya.

Manajer Pendidikan dan Penelitian,

dr. Aslwin Taslim, Sp.Onk.Rad, M.Kes
NIP. 198304252012121003

Lampiran 6. Surat Persetujuan Etik



KEMENTERIAN PENDIDIKAN, KEBUDAYAAN, RISET DAN TEKNOLOGI
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KOMITE ETIK PENELITIAN UNIVERSITAS HASANUDDIN
RSPTN UNIVERSITAS HASANUDDIN
RSUP Dr. WAHIDIN SUDIROHUSODO MAKASSAR
Sekretariat : Lantai 2 Gedung Laboratorium Terpadu
JL.PERINTIS KEMERDEKAAN KAMPUS TAMALANREA KM.10 MAKASSAR 90245.
Contact Person: dr. Agussalim Bukhari, MMed, PhD, SpCK TELP. 081241850858, 0411 5780103, Fax : 0411-581431



REKOMENDASI PERSETUJUAN ETIK Nomor : 204/UN4.6.4.5.31/ PP36/ 2023

Tanggal: 3 April 2023

Dengan ini Menyatakan bahwa Protokol dan Dokumen yang Berhubungan Dengan Protokol berikut ini telah mendapatkan Persetujuan Etik :

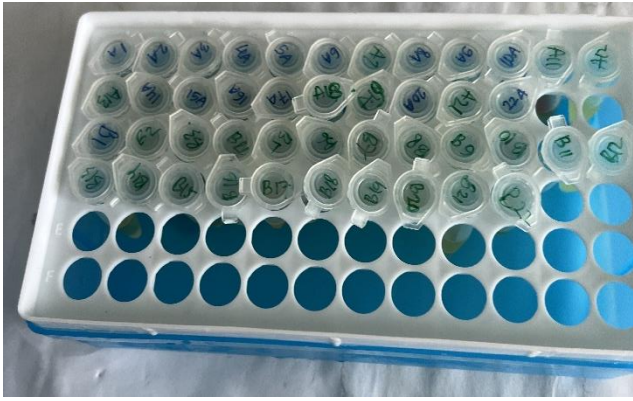
No Protokol	UH23020132	No Sponsor Protokol	
Peneliti Utama	Wahyu Usman, S.Ft.,Ftr	Sponsor	
Judul Peneliti	PENGARUH LATIHAN MALAM TERHADAP KADAR MALONDIALDEHID, INTERLEUKIN-6, DAN CREATINE KINASE PADA ATLET BULUTANGKIS DI KOTA MAKASSAR		
No Versi Protokol	2	Tanggal Versi	29 Maret 2023
No Versi PSP	2	Tanggal Versi	29 Maret 2023
Tempat Penelitian	PB Manggala yang berlatih di GOR MBC Jalan Borong Raya Baru, Batua, Kec.Manggala, Kota Makassar		
Jenis Review	<input type="checkbox"/> Exempted <input checked="" type="checkbox"/> Expedited <input type="checkbox"/> Fullboard Tanggal	Masa Berlaku 3 April 2023 sampai 3 April 2024	Frekuensi review lanjutan
Ketua KEP Universitas Hasanuddin	Nama Prof.Dr.dr. Suryani As'ad, M.Sc.,Sp.GK (K)	Tanda tangan	
Sekretaris KEP Universitas Hasanuddin	Nama dr. Agussalim Bukhari, M.Med.,Ph.D.,Sp.GK (K)	Tanda tangan	

Kewajiban Peneliti Utama:

- Menyerahkan Amandemen Protokol untuk persetujuan sebelum di implementasikan
- Menyerahkan Laporan SAE ke Komisi Etik dalam 24 Jam dan dilengkapi dalam 7 hari dan Laporan SUSAR dalam 72 Jam setelah Peneliti Utama menerima laporan
- Menyerahkan Laporan Kemajuan (progress report) setiap 6 bulan untuk penelitian resiko tinggi dan setiap setahun untuk penelitian resiko rendah
- Menyerahkan laporan akhir setelah Penelitian berakhir
- Melaporkan penyimpangan dari prokol yang disetujui (protocol deviation / violation)

Lampiran 7. Dokumentasi



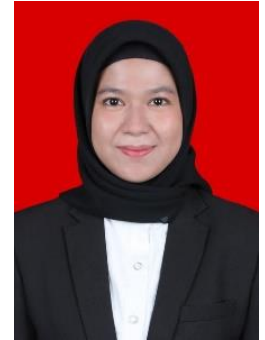


Lampiran 8. *Curriculum Vitae*

Curriculum Vitae

A. Data Pribadi

1. Nama : Wahyu Usman
2. Tempat / Tanggal Lahir : Ujung Pandang, 13 Oktober 1997
3. Jenis Kelamin : Perempuan
4. Alamat Asal : Jl. Tinumbu Lr. 149 No. 179,
Makassar
5. Email : ayuusman97@gmail.com



B. Riwayat Pendidikan

1. SMA Negeri 1 Makassar (2012-2015)
2. Program Studi S1 Fisioterapi Fakultas Keperawatan Universitas Hasanuddin (2015-2019).
3. Profesi Fisioterapi Fakultas Keperawatan Universitas Hasanuddin (2019-2020)
4. Ilmu Biomedik Pascasarjana Universitas Hasanuddin (2022-2023)

C. Pekerjaan dan Riwayat Pekerjaan

- Jenis Pekerjaan : Mahasiswa S2 Ilmu Biomedik

D. Karya Ilmiah

HKI dan Proceeding

1. HKI Karya tulis : Analisis Zona Latihan dan Vital Sign Pada Atlet dan Non Atlet Bulutangkis yang Berlatih Pagi dan Malam Hari (EC00202357639)
2. Proceeding : Analysis of Training Zones and Vital Signs During Morning and Night Exercise in Athletes and Non Athletes Badminton (The 1st International Conference on Health and Medicine, Faculty of Medicine, Universitas Pattimura)