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LAMPIRAN

Lampiran 1. *Informed Consent*

LEMBAR PERSETUJUAN RESPONDEN (*INFORMED CONSENT*)

Saya yang bertanda tangan dibawah ini:

Nama :

Umur :

Alamat :

Menyatakan bersedia menjadi responden pada penelitian yang di lakukan oleh:

Nama : Hamdiah Hambali

NIM : C041171010

Alamat : Jalan Perintis Kemerdekaan 3

Judul Penelitian : Hubungan Aktivitas Fisik Dengan *Stunting* Pada Anak Sekolah Dasar Di Kecamatan Lembang.

Subyek penelitian mendapat kesempatan mengajukan pertanyaan mengenai segala sesuatu yang berhubungan dengan penelitian tersebut. Oleh karena itu saya (bersedia / tidak bersedia) secara sukarela untuk menjadi subyek penelitian. Dengan ketentuan, hasil pemeriksaan akan dirahasiakan dan hanya semata-mata untuk kepentingan ilmu pengetahuan. Demikian surat pernyataan ini saya buat dengan sebenar-benarnya tanpa ada keterpaksaan dari pihak manapun, agar dapat dipergunakan sebagaimana mestinya.

Lembang,.....// 2021.

Responden

Lampiran 2. Surat Izin Penelitian



PEMERINTAH KABUPATEN PINRANG
DINAS PENANAMAN MODAL DAN PELAYANAN TERPADU SATU PINTU
UNIT PELAYANAN TERPADU SATU PINTU
 Jl. Jend. Sukawati Nomor 40, Telp/Fax : (0421)921695 Pinrang 91212

KEPUTUSAN KEPALA DINAS PENANAMAN MODAL DAN PELAYANAN TERPADU SATU PINTU KABUPATEN PINRANG
 Nomor : 503/010/PENELITIAN/DP/PTSP/05/2021

Tentang
BERGEMENDASI PENELITIAN

Mengingat :

- bahwa keberhasilan penelitian terhadap pemukiman yang diteliti tanggal 06-05-2021 atas nama HAMDIAH HAMBALI, dianggap telah memenuhi syarat-syarat yang diperlukan sehingga dapat diberikan Rekomendasi Penelitian.

Mengingat :

- 1. Undang - Undang Nomor 20 Tahun 1954,
- 2. Undang - Undang Nomor 18 Tahun 2002,
- 3. Undang - Undang Nomor 25 Tahun 2007,
- 4. Undang - Undang Nomor 25 Tahun 2009,
- 5. Undang - Undang Nomor 23 Tahun 2014,
- 6. Peraturan Presiden RI Nomor 97 Tahun 2016,
- 7. Peraturan Menteri Dalam Negeri Nomor 64 Tahun 2011 sebagaimana telah diubah dengan Peraturan Menteri Dalam Negeri Nomor 7 Tahun 2014,
- 8. Peraturan Bupati Pinrang Nomor 48 Tahun 2016, dan
- 9. Peraturan Bupati Pinrang Nomor 38 Tahun 2018.

Memperhatikan :

- 1. Rekomendasi Tim Tawar PTSP : 0170/01.1/01/DP/PTSP/05/2021, Tanggal : 06-05-2021
- 2. Berita Acara Pemeriksaan (BAP) Nomor : 0190/01/01/PENELITIAN/DP/PTSP/05/2021, Tanggal : 06-05-2021

M E M U T U S K A N

Menetapkan :

KESATU

- Memberikan Rekomendasi Penelitian kepada :

1. Nama Lembaga	• UNIVERSITAS HASANUDDIN
2. Alamat Lembaga	• J. P. SEMERDELAN KM. 18 MAKASSAR
3. Nama Peneliti	• HAMDIAH HAMBALI
4. Judul Penelitian	• WUBUNGAN AKTIVITAS FISIK DENGAN STUNTING PADA ANAK SEKOLAH DASAR DI KECAMATAN LEMBIANG KABUPATEN PINRANG
5. Jangka waktu Penelitian	• 1 Bulan
6. Sasarantarget Penelitian	• ANAK SEKOLAH DASAR USIA 6-12 TAHUN
7. Lokasi Penelitian	• Kecamatan Lembiang

KEDUA

- Rekomendasi Penelitian ini berlaku selama 6 (enam) bulan atau paling lambat tanggal 06-11-2021.

KETIGA

- Peneliti wajib mematuhi dan melaksanakan ketentuan dalam Rekomendasi Penelitian ini serta wajib memberikan laporan hasil penelitian kepada Pemerintah Kabupaten Pinrang melalui Unit PTSP selambat-lambatnya 6 (enam) bulan setelah penelitian dilaksanakan.

KEEMPAT

- Keputusan ini mulai berlaku pada tanggal ditetapkan, apabila dikemudian hari terdapat kekeliruan, dan akan diadakan perbaikan sebagaimana mestinya.

Ditetapkan di Pinrang Pada Tanggal 07 Mei 2021



Biaya : Rp 0,-

Ditandatangani Secara Elektronik Oleh :


ANDI MIRANI, AP., MSI
 NIP. 197406031993112001
 Kepala Dinas Penanaman Modal dan PTSP
 Selaku Kepala Unit PTSP Kabupaten Pinrang






Dokumen ini telah ditandatangani secara elektronik menggunakan sertifikat elektronik yang diterbitkan BKR

Lampiran 3. Surat Telah Melakukan Penelitian


PEMERINTAH KABUPATEN PINRANG
KECAMATAN LEMBANG
 Alamat : Jl. Poros Pinrang Polman No. 41 Tappa Tlp. (0421) 990000

SURAT KETERANGAN PENELITIAN
 Nomor : 429/127/V/2021

Yang bertanda tangan dibawah ini

1. Nama : MUHAMMAD YUSUF NUR, S.STP
2. Jabatan : Camat Lembang
3. Unit Kerja : Kantor Camat Lembang
4. Alamat : Tappa, Kelurahan Tatalokong Kec. Lembang Kabupaten Pinrang

Dengan ini menerangkan bahwa


1. Nama : HAMDIAH HAMDIAH
2. Nomor Pokok : 001171011
3. Program Studi : Fisioterapi
4. Universitas : Universitas Hasanudin Makassar

Benar-benar telah melakukan penelitian dalam rangka Pemetaan wilayah dengan judul
 " HUBUNGAN AKTIVITAS FISIK DENGAN STUNTING PADA ANAK SEKOLAH DASAR DI KECAMATAN LEMBANG KABUPATEN PINRANG "





Sejak tanggal 26 April sampai dengan tanggal 23 Mei 2021, dan telah pula menjabarkan materi hasil penelitiannya dengan kami.

Dengan surat keterangan ini kami buat dengan sebenarnya, agar dapat digunakan sebagaimana mestinya.

Tappa, 24 Mei 2021


CAMAT,
MUHAMMAD YUSUF NUR, S.STP
 Camat
 Kecamatan Lembang
 Kabupaten Pinrang
 1900326 200003 1 001

Lampiran 4. Surat Lolos Uji Etik

KEMENTERIAN RISET, TEKNOLOGI DAN PENDIDIKAN TINGGI			
 UNIVERSITAS HASANUDDIN FAKULTAS KEDOKTERAN GIGI RUMAH SAKIT GIGI DAN MULUT KOMITE ETIK PENELITIAN KESEHATAN Sekretariat : Lantai 2, Gedung Lama RSGM Unhar JL.Kandea No. 5 Makassar Contact Person: drg. Muhammad Iqbal, Sp.Prost/Sp.Pros/Sp.Ortho/Sp.Perio TELP. 081342571013/08114919191			
			
REKOMENDASI PERSETUJUAN ETIK			
Nomor: 0034/PL.09/KEPK FKG-RSGM UNHAS/2021			
Tanggal: 17 Mei 2021			
Dengan ini menyatakan bahwa protokol dan dokumen yang berhubungan dengan protokol berikut ini telah mendapatkan persetujuan etik:			
No. Protokol	UH 17120438	No Protokol Sponsor	
Peneliti Utama	Hamdiah Hambali	Sponsor	Pribadi
Judul Peneliti	Hubungan Aktivitas Fisik dengan Stunting pada Anak Sekolah Dasar di Kecamatan Lembang Kabupaten Pinrang		
No. Versi Protokol	1	Tanggal Versi	28 April 2021
No. Versi Protokol		Tanggal Versi	
Tempat Penelitian	Kabupaten Pinrang		
Dokumen Lain			
Jenis Review	<input checked="" type="checkbox"/> Exempted <input type="checkbox"/> Expedited <input type="checkbox"/> Fullboard	Masa Berlaku 17 Mei 2021-17 Mei 2022	Frekuensi Review Lanjutan
Ketua Komisi Etik Penelitian	Nama: Dr. drg. Marhamah, MKes	Tanda Tangan 	Tanggal
Sekretaris Komisi Etik Penelitian	Nama: drg. Muhammad Iqbal, Sp.Prost	Tanda Tangan 	Tanggal

Kewajiban peneliti utama:

- Menyerahkan Amandemen Protokol untuk persetujuan sebelum diimplementasikan
- Menyerahkan laporan SAE ke Komisi Etik dalam 24 Jam dan dilengkapi dalam 7 hari dan lapor 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 protokol yang disetujui (*protocol deviation/violation*)
- Mematuhi semua aturan yang berlaku.

Lampiran 5. *Physical Activity Questioner for Children (PAQ-C)*

Identitas Responden

Nama	:
Jenis Kelamin	:
Usia	:

Kuesioner ini bertujuan untuk mengetahui tingkat aktivitas fisik sejak 7 hari yang lalu.

Petunjuk :

1. Tidak ada jawaban yang benar atau salah, ini bukan tes.
2. Semua pertanyaan harus dijawab dengan jujur dan akurat.
3. Pilih salah satu jawaban dengan tanda silang.

Aktivitas fisik di waktu luang

Apakah kamu melakukan beberapa aktivitas dibawah ini sejak 7 hari yang lalu?

Jika 'iya', berapa kali ? Berikan tandan sialng 'X' pada jawaban yang sesuai

No	Nama Kegiatan	Tidak Pernah	1 – 2 Kali	3 – 4 Kali	5 – 6 Kali	Lebih dari 7 Kali
1.	Skipping (bermain tali)					
2.	Futsal					
3.	Voli					
4.	Basket					
5.	Jalan					
6.	Bersepeda					
7.	Lari-lari					
8.	Senam					
9.	Berenang					
10.	Kasti					
11.	Menari/dance					
12.	Sepak bola					
13.	Badminton					
14.	Sepak takraw					
15.	Sepatu roda					
16.	Tenis meja					
17.	Tenis					
18.	Silat/karate					
19.	Lainnya					
20.	Lainnya					

1. Selama 7 hari yang lalu, selama pelajaran olahraga, seberapa sering kamu bersikap aktif dalam melakukan olahraga?

- a. Tidak ikut pelajaran olahraga
- b. Jarang aktif
- c. Kadang-kadang aktif
- d. Sering aktif
- e. Selalu aktif

2. Selama 7 hari yang lalu, apa yang sering kamu lakukan ketika waktu istirahat?

- a. Duduk duduk (mengobrol, membaca, mengerjakan tugas)
- b. Berdiri di sekitar
- c. Jalan-jalan berkeliling
- d. Kadang lari-lari dan bermain
- e. Sering berlari dan bermain

3. Selama 7 hari yang lalu, apa yang biasanya dilakukan ketika jam makan siang selain makan:

- a. Duduk duduk (mengobrol, membaca, mengerjakan tugas)
- b. Berdiri di sekitar
- c. Jalan-jalan berkeliling
- d. Kadang lari-lari dan bermain
- e. Sering berlari dan bermain

4. Selama 7 hari yang lalu, setelah pulang sekolah seberapa sering melakukan olahraga (sepakbola, kejar-kejaran sesama teman, atau menari yang membuat berkeringat)?

- a. Tidak pernah
- b. 1 kali seminggu
- c. 2 – 3 kali seminggu
- d. 4 kali seminggu
- e. 5 kali seminggu

5. Selama 7 hari yang lalu, pada sore hari seberapa sering melakukan olahraga (sepakbola, kejar-kejaran sesama teman, atau menari yang membuat berkeringat)?

- a. Tidak pernah
- b. 1 kali seminggu
- c. 2 – 3 kali seminggu
- d. 4 kali seminggu
- e. 6 – 7 kali seminggu

6. Pada akhir minggu yang lalu (hari sabtu dan minggu) seberapa sering melakukan olahraga (sepak bola, kejar-kejaran sesama teman, atau menari yang membuat berkeringat)?

- a. Tidak pernah
- b. 1 kali
- c. 2 – 3 kali
- d. 4 – 5 kali
- e. Lebih dari 5 kali

7. Bacalah semua pernyataan di bawah ini. Pilih salah satu pernyataan yang menggambarkan dirimu!

- a. Hampir semua waktu luang saya habiskan untuk bersantai
- b. Di waktu luang, saya kadang-kadang (1 – 2 kali seminggu) melakukan aktivitas fisik seperti olahraga (lari-lari, sepak bola, bersepeda, dan lain-lain)
- c. Di waktu luang, saya sering (3 – 4 kali seminggu) melakukan aktivitas seperti olahraga (lari-lari, sepak bola, bersepeda, dan lain-lain)
- d. Di waktu luang, saya lebih sering (5 – 6 kali seminggu) melakukan aktivitas seperti olahraga (lari-lari, sepak bola, bersepeda, dan lain-lain)
- e. Di waktu luang, saya sangat sering (>6 kali seminggu) melakukan aktivitas seperti olahraga (lari-lari, sepak bola, bersepeda, dan lain-lain)

8. Apakah selama seminggu ini kamu pernah sakit atau mengalami sesuatu yang menghambat aktivitas fisik?

- a. Ya
- b. Tidak

9. Seberapa sering kamu melakukan aktivitas fisik (seperti olahraga lari-lari, sepak bola, bersepeda, menari dan lain-lain).

Berilah tanda silang 'X' pada jawaban yang sesuai.

No	Hari	Tidak pernah	1 – 2 kali	3 – 4 kali	5 – 6 kali	Lebih dari 7 kali
1.	Senin					
2.	Selasa					
3.	Rabu					
4.	Kamis					
5.	Jumat					
6.	Sabtu					
7.	Minggu					

10. Apakah kamu sakit minggu lalu, atau apakah ada yang menghalangi untuk melakukan aktivitas fisik normal

- a. Iya
- b. Tidak

Jika iya apa yang mencegah?

Lampiran 6. Hasil Uji SPSS

1. Karakteristik Demografis dan Klinis Subjek Penelitian

Usia

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid 6	31	8.5	8.5	8.5
7	51	14.0	14.0	22.5
8	65	17.8	17.8	40.3
9	61	16.7	16.7	57.0
10	82	22.5	22.5	79.5
11	53	14.5	14.5	94.0
12	22	6.0	6.0	100.0
Total	365	100.0	100.0	

Descriptive Statistics

	N	Minimum	Maximum	Mean	Std. Deviation
Usia	365	6.00	12.00	8.9836	1.69023
BB	365	13.00	64.00	29.3918	5.04512
TB	365	104.00	158.00	131.4301	9.60447
Hasil	365	-4.93	4.87	-.5422	1.26905
Valid N (listwise)	365				

Jenis Kelamin

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Laki-laki	189	51.8	51.8	51.8
	Perempuan	176	48.2	48.2	100.0
	Total	365	100.0	100.0	

Aktivitas Fisik

	Frequency	Percent	Valid Percent	Cumulative Percent
Valid Rendah	4	1.1	1.1	1.1

Jenis Kelamin * Aktivitas Fisik Crosstabulation

Sedang	55	15.1	15.1	16.2
Tinggi	180	49.3	49.3	65.5
Sangat Tinggi	126	34.5	34.5	100.0
Total	365	100.0	100.0	

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Jenis Kelamin * Aktivitas Fisik	365	100.0%	0	0.0%	365	100.0%

Stunting

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Sangat Pendek	8	2.2	2.2	2.2
	Pendek	23	6.3	6.3	8.5
	Normal	334	91.5	91.5	100.0
	Total	365	100.0	100.0	

Case Processing Summary

	Cases					
	Valid		Missing		Total	
	N	Percent	N	Percent	N	Percent
Jenis Kelamin * Stunting	365	100.0%	0	0.0%	365	100.0%

			Aktivitas Fisik				Total
			Rendah	Sedang	Tinggi	Sangat Tinggi	
Jenis Kelamin	Laki-laki	Count	2	32	90	65	189
		% within Jenis Kelamin	1.1%	16.9%	47.6%	34.4%	100.0%
		% within Aktivitas Fisik	50.0%	58.2%	50.0%	51.6%	51.8%
		% of Total	0.5%	8.8%	24.7%	17.8%	51.8%
	Perempuan	Count	2	23	90	61	176
		% within Jenis Kelamin	1.1%	13.1%	51.1%	34.7%	100.0%
		% within Aktivitas Fisik	50.0%	41.8%	50.0%	48.4%	48.2%
		% of Total	0.5%	6.3%	24.7%	16.7%	48.2%
Total		Count	4	55	180	126	365
		% within Jenis Kelamin	1.1%	15.1%	49.3%	34.5%	100.0%
		% within Aktivitas Fisik	100.0%	100.0%	100.0%	100.0%	100.0%
		% of Total	1.1%	15.1%	49.3%	34.5%	100.0%

Usia * Aktivitas Fisik Crosstabulation

			Aktivitas Fisik				Total
			Rendah	Sedang	Tinggi	Sangat Tinggi	
Usia	6	Count	0	5	8	18	31
		% within Usia	0.0%	16.1%	25.8%	58.1%	100.0%
		% within Aktivitas Fisik	0.0%	9.1%	4.4%	14.3%	8.5%
		% of Total	0.0%	1.4%	2.2%	4.9%	8.5%
	7	Count	0	6	21	24	51
		% within Usia	0.0%	11.8%	41.2%	47.1%	100.0%
		% within Aktivitas Fisik	0.0%	10.9%	11.7%	19.0%	14.0%
		% of Total	0.0%	1.6%	5.8%	6.6%	14.0%
	8	Count	0	2	37	26	65

Jenis Kelamin * Stunting Crosstabulation

	% within Usia	0.0%	3.1%	56.9%	40.0%	100.0%
	% within Aktivitas Fisik	0.0%	3.6%	20.6%	20.6%	17.8%
	% of Total	0.0%	0.5%	10.1%	7.1%	17.8%
9	Count	0	2	31	28	61
	% within Usia	0.0%	3.3%	50.8%	45.9%	100.0%
	% within Aktivitas Fisik	0.0%	3.6%	17.2%	22.2%	16.7%
	% of Total	0.0%	0.5%	8.5%	7.7%	16.7%
10	Count	0	17	38	27	82
	% within Usia	0.0%	20.7%	46.3%	32.9%	100.0%
	% within Aktivitas Fisik	0.0%	30.9%	21.1%	21.4%	22.5%
	% of Total	0.0%	4.7%	10.4%	7.4%	22.5%
11	Count	4	16	30	3	53
	% within Usia	7.5%	30.2%	56.6%	5.7%	100.0%
	% within Aktivitas Fisik	100.0%	29.1%	16.7%	2.4%	14.5%
	% of Total	1.1%	4.4%	8.2%	0.8%	14.5%
12	Count	0	7	15	0	22
	% within Usia	0.0%	31.8%	68.2%	0.0%	100.0%
	% within Aktivitas Fisik	0.0%	12.7%	8.3%	0.0%	6.0%
	% of Total	0.0%	1.9%	4.1%	0.0%	6.0%
Total	Count	4	55	180	126	365
	% within Usia	1.1%	15.1%	49.3%	34.5%	100.0%
	% within Aktivitas Fisik	100.0%	100.0%	100.0%	100.0%	100.0%
	% of Total	1.1%	15.1%	49.3%	34.5%	100.0%

			Stunting			Total
			Sangat Pendek	Pendek	Normal	
Jenis Kelamin Laki-laki	Count	4	15	170	189	
	% within Jenis Kelamin	2.1%	7.9%	89.9%	100.0%	
	% within Stunting	50.0%	65.2%	50.9%	51.8%	
	% of Total	1.1%	4.1%	46.6%	51.8%	
Perempuan	Count	4	8	164	176	
	% within Jenis Kelamin	2.3%	4.5%	93.2%	100.0%	
	% within Stunting	50.0%	34.8%	49.1%	48.2%	
	% of Total	1.1%	2.2%	44.9%	48.2%	
Total	Count	8	23	334	365	
	% within Jenis Kelamin	2.2%	6.3%	91.5%	100.0%	
	% within Stunting	100.0%	100.0%	100.0%	100.0%	
	% of Total	2.2%	6.3%	91.5%	100.0%	

Usia * Stunting Crosstabulation

			Stunting			Total
			Sangat Pendek	Pendek	Normal	
Usia 6	Count	0	3	28	31	
	% within Usia	0.0%	9.7%	90.3%	100.0%	
	% within Stunting	0.0%	13.0%	8.4%	8.5%	
	% of Total	0.0%	0.8%	7.7%	8.5%	
7	Count	0	3	48	51	
	% within Usia	0.0%	5.9%	94.1%	100.0%	
	% within Stunting	0.0%	13.0%	14.4%	14.0%	
	% of Total	0.0%	0.8%	13.2%	14.0%	
8	Count	0	1	64	65	
	% within Usia	0.0%	1.5%	98.5%	100.0%	
	% within Stunting	0.0%	4.3%	19.2%	17.8%	
	% of Total	0.0%	0.3%	19.2%	17.8%	

	% of Total	0.0%	0.3%	17.5%	17.8%
9	Count	0	2	59	61
	% within Usia	0.0%	3.3%	96.7%	100.0%
	% within Stunting	0.0%	8.7%	17.7%	16.7%
	% of Total	0.0%	0.5%	16.2%	16.7%
10	Count	0	6	76	82
	% within Usia	0.0%	7.3%	92.7%	100.0%
	% within Stunting	0.0%	26.1%	22.8%	22.5%
	% of Total	0.0%	1.6%	20.8%	22.5%
11	Count	7	6	40	53
	% within Usia	13.2%	11.3%	75.5%	100.0%
	% within Stunting	87.5%	26.1%	12.0%	14.5%
	% of Total	1.9%	1.6%	11.0%	14.5%
12	Count	1	2	19	22
	% within Usia	4.5%	9.1%	86.4%	100.0%
	% within Stunting	12.5%	8.7%	5.7%	6.0%
	% of Total	0.3%	0.5%	5.2%	6.0%
Total	Count	8	23	334	365
	% within Usia	2.2%	6.3%	91.5%	100.0%
	% within Stunting	100.0%	100.0%	100.0%	100.0%
	% of Total	2.2%	6.3%	91.5%	100.0%

2. Hasil Uji Normalitas dan Uji Spearmen Rho

One-Sample Kolmogorov-Smirnov Test

		Aktivitas Fisik
N		365
Normal Parameters ^{a,b}	Mean	3.5121
	Std. Deviation	.45188
Most Extreme Differences	Absolute	.072
	Positive	.033
	Negative	-.072
Test Statistic		.072
Asymp. Sig. (2-tailed)		.000 ^c

- a. Test distribution is Normal.
 b. Calculated from data.
 c. Lilliefors Significance Correction.

One-Sample Kolmogorov-Smirnov Test

		Stunting
N		365
Normal Parameters ^{a,b}	Mean	-.5422
	Std. Deviation	1.26905
Most Extreme Differences	Absolute	.094
	Positive	.094
	Negative	-.059
Test Statistic		.094
Asymp. Sig. (2-tailed)		.000 ^c

- a. Test distribution is Normal.
 b. Calculated from data.
 c. Lilliefors Significance Correction.

Correlations

			Aktivitas Fisik	Stunting
Spearman's rho	Aktivitas Fisik	Correlation Coefficient	1.000	.733**
		Sig. (2-tailed)	.	.000
		N	365	365
	Stunting	Correlation Coefficient	.733**	1.000
		Sig. (2-tailed)	.000	.
		N	365	365

** . Correlation is significant at the 0.01 level (2-tailed).

Lampiran 7. Dokumentasi Penelitian





RELATIONSHIP OF PHYSICAL ACTIVITY WITH STUNTING IN ELEMENTARY SCHOOL CHILDREN IN LEMBANG DISTRICT, PINRANG REGENCY

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Abstract

Physical activity and stunting rates in elementary school children are important things to study because they have an impact on growth and development which can have an impact on productivity and health. Problems caused by lack of physical activity need to be investigated in terms of health or a healthy lifestyle. This study aims to determine the relationship between physical activity and stunting in elementary school children in Lembang District. This study uses a cross-sectional design. The population of this study is elementary school students in Lembang District aged 6-12 years. Sampling using purposive sampling technique with a sample of three hundred and sixty five people (n=365) who are elementary school students in Lembang District, Pinrang Regency. Data was collected by collecting primary data through the Physical Activity Questionnaire for Children (PAQC) instruments and anthropometric measurements. The data collected was carried out by the Spearman Rho test to see the correlation of physical activity to stunting. From the results of SPSS obtained a significance value of $p = 0.000$ ($p < 0.05$). The value of r (spearman correlation) obtained is 0.733 which shows that there is a visible relationship between physical activity and stunting in elementary school children in Lembang District, Pinrang Regency.

INTRODUCTION

The health condition of children in the world is a serious concern based on data, one in three children in the world is stunted and a quarter of all children worldwide are underweight¹. If this condition continues, it can increase the risk of health problems such as decreased physical activity, decreased cognitive development, decreased productive capacity, mental health, and increased risk of degenerative diseases². Stunting and underweight are associated with poor nutritional intake and lack of activity at the stage of growth and development of children³.

Stunting caused by multi-dimensional factors such as a history of infectious diseases, nutritional status, knowledge of parents and living environment⁴. Children's activities need to be controlled in the early growth period because one of the factors that cause stunting is the lack of physical activity levels, stunted children will have excess fat tissue deposits, fat accumulation causes fatty tissue oxidation disorders which have an impact on adipose tissue accumulation so

that people who experience stunting tends to spend their time doing physical activities that expend low energy⁵.

By doing physical activity according to WHO guidelines, it can increase blood flow for oxygen supply to the brain, this has an impact on increasing physical fitness, energy balance in the body, controlling body weight, influencing growth and development processes, and minimizing stress⁶. Physical activity that involves many body components including heart and lung function can increase lung endurance, lung endurance is important for life productivity and reduce the risk of degenerative diseases⁷.

METHOD

This study used a cross-sectional design by examining the relationship between physical activity and stunting in elementary school children in Lembang District, Pinrang Regency. The population in this study were elementary school students in Lembang District with a vulnerable age of 6-12 years. Participants were not included in this study if they had a history of hospitalization in the last one month, had cognitive and physical disabilities, were born prematurely and had chronic diseases.

Data was collected by taking anthropometric measurements and using a questionnaire containing general information on the respondents, including name, age, gender. Physical activity was measured using the Physical Activity Questionnaire for Children (PAQC) while stunting was measured using anthropometric measurements calculated using WHO Antoplus.

The data obtained are primary data obtained from the results of measurements of physical activity and stunting. After the data was collected, it was analyzed using univariate and bivariate analysis. Univariate analysis was used to determine the frequency distribution of each variable. While the bivariate analysis was processed using the Spearmen Rho test.

RESULT

The results obtained by the characteristics of respondents based on age, respondents in the age category 10 are the largest number of respondents, namely 82 people (22.5%), based on gender characteristics indicate that the number of respondents of primary school children is male more than gender. women as many as 189 (51.8%). In this study, the measurement of physical activity found that table 1 shows the proportion of respondents based on the level of physical activity of elementary school children in Lembang District. It was found that from a total of 365 respondents there were four levels of physical activity, namely low, medium, high and very high, with the highest level of high activity being 180 people (49.3%).

Table 1: Distribution of Physical Activity

Characteristics of Respondents	Frequency	Percentage (%)
Physical Activity		
Low	4	1.1
Medium	55	15.1
High	180	49.3
Very high	126	34.5
Total	365	100.0

Source: Primary Data, 2021

Table 2: Stunting Distribution

Characteristics of Respondents	Frequency	Percentage (%)
Stunting		
Very short	8	2.2
Short	23	6.3
Normal	334	91.5
Total	365	100.0

Source: Primary Data, 2021

Table 2 shows that the distribution of respondents based on stunting levels is divided into three categories, namely very short, short and normal. It was found that elementary school children dominated the normal category as many as 334 (91.5%). of 365 students in the normal category dominated by 91.5%. However, in the distribution of the data, there are also very short and short categories of 2.2% and 6.3%. Based on the data obtained in the field, children who are included in the very short and short categories are not only influenced by physical activity factors but also economic and genetic factors.

Table 3 Analysis of the Relationship between Physical Activity and Stunting

Stunting	Physical Activity		
	n	R	p
	365	0.733	0.000

Source: Primary data, 2021 (Note: n = number of samples, p = Spearman Significance, r = Spearman correlation)

Based on table 5.5 shows the results of testing physical activity with stunting. The test results show the r value of 0.733 with a p value of 0.000. This shows that the p value obtained is smaller than the significance level used of 0.05. It was concluded that there was a significant relationship between physical activity and stunting.

DISCUSSION

The results showed that there was a significant relationship between physical activity and stunting in elementary school students in Lembang District, with a significance value on the F test of 0.000 ($p < 0.05$). Samples who experience stunting tend to do low physical activity, while normal samples tend to do high physical activity⁸. Which states that stunted children tend to do low physical activity so that physical activity can be a risk factor for stunting. This is in line with WHO guidelines by doing 60 minutes of physical activity three times a week to strengthen muscles and bones⁹.

Based on previous research that physical activity in school-age children has a contribution of 38 - 50% in the child's growth process¹⁰. Increased physical activity can increase osteogenesis¹¹. The process of osteogenesis is influenced by growth hormone, growth hormone is stimulated and its secretion will increase along with increased physical activity. Then growth hormone will stimulate Insulin Growth factor which is one of the hormones that affect bone mass¹². In addition to bone size, physical activity also affects bone strength.

Physical activity can increase bone mineral mass and facilitate the work of the cardiovascular system. If the cardiovascular system smoothly supplies nutrients well into the osteogenesis process, the osteogenesis process will run well too, the osteogenesis process is still ongoing and has increased at school age¹³.

Physical activity contributed greatly to the creation of a regression relationship in this study. Physical activity has been shown to significantly affect the quality of life, including preventing chronic diseases such as chronic fatigue syndrome¹⁴. Good physical activity will provide fitness and improve quality of life, on the other hand, if physical activity is lacking, it will cause a decrease in the quality of health in school children.

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