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Lampiran 1. Informed Consent

## INFORMED CONSENT

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.

	<b>Nama</b>	<b>Tanda tangan</b>
<b>Tgl/Bln/Thn</b>		
Responden/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 : Nindrahayu

Alamat: BTP Blok J 431B Makassar

Tlp : 085255172279

**Penanggungjawab Medis**

Irianti, S.Ft, Physio

Lampiran 2. Surat Etik



KEMENTERIAN PENDIDIKAN, KEBUDAYAAN  
RISET, DAN TEKNOLOGI  
UNIVERSITAS HASANUDDIN  
FAKULTAS KESEHATAN MASYARAKAT

Jl. Perintis Kemerdekaan Km.10 Makassar 90245, Telp.(0411) 585658,  
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**REKOMENDASI PERSETUJUAN ETIK**

Nomor : 2556/UN4.14.1/TP.01.02/2023

Tanggal : 01 Maret 2023

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

No.Protokol	22223052046	No. Sponsor Protokol	
Peneliti Utama	<b>Nindrahayu</b>	Sponsor	Pribadi
Judul Peneliti	<b>Perbandingan Efektivitas <i>Balance Strategy Exercise</i> dan <i>Theraband Resistance Exercise</i> Terhadap Risiko Jatuh dan Kekuatan Otot Tungkai pada Lansia</b>		
No.Versi Protokol	1	Tanggal Versi	22 Februari 2023
No.Versi PSP	1	Tanggal Versi	22 Februari 2023
Tempat Penelitian	<b>LKS LU Batara Hati Mulia Kabupaten Gowa</b>		
Judul Review	<input type="checkbox"/> Exempted <input checked="" type="checkbox"/> Expedited <input type="checkbox"/> Fullboard	Masa Berlaku <b>01 Maret 2023</b> Sampai <b>01</b> <b>Maret 2024</b>	Frekuensi review lanjutan
Ketua Komisi Etik Penelitian	Nama : Prof.dr.Veni Hadju,M.Sc,Ph.D	Tanda tangan 	Tanggal <b>01 Maret 2023</b> 
Sekretaris komisi Etik Penelitian	Nama : Dr. Wahiduddin, SKM.,M.Kes	Tanda tangan 	Tanggal <b>01 Maret 2023</b> 

Kewajiban Peneliti Utama :

1. Menyerahkan Amandemen Protokol untuk persetujuan sebelum di implementasikan
2. 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
3. Menyerahkan Laporan Kemajuan (progress report) setiap 6 bulan untuk penelitian resiko tinggi dan setiap setahun untuk penelitian resiko rendah
4. Menyerahkan laporan akhir setelah Penelitian berakhir
5. Melaporakn penyimpangan dari protocol yang disetujui (protocol deviation/violation)
6. Mematuhi semua peraturan yang ditentukan



Lampiran 3. Surat Pengantar Penelitian



KEMENTERIAN PENDIDIKAN, KEBUDAYAAN,  
RISET DAN TEKNOLOGI  
UNIVERSITAS HASANUDDIN  
SEKOLAH PASCASARJANA

Jalan Perintis Kemerdekaan km. 10 Makassar 90245 Telp. : (0411) 585034, 585036  
Fax. : (0411) 585868, E-mail : [info@pasca.unhas.ac.id](mailto:info@pasca.unhas.ac.id) <http://pasca.unhas.ac.id>

Nomor : 11483/UN4.20.1/PT.01.04/2023  
Perihal : Permohonan Izin Penelitian

10 Maret 2023

Yth. Kepala LKS LU Batara Hati Mulia  
Kabupaten Gowa

Dengan hormat disampaikan bahwa mahasiswa Sekolah Pascasarjana Universitas Hasanuddin yang tersebut dibawah ini :

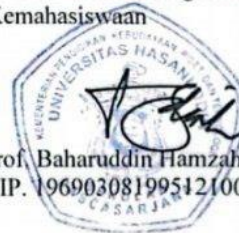
Nama : Nindrahayu  
Nomor Pokok : P062211004  
Program Pendidikan : Magister (S2)  
Program Studi : Ilmu Biomedik

Bermaksud melakukan penelitian dalam rangka persiapan penulisan tesis terkait dengan judul "Perbandingan Efektifitas Balance Strategy Exercise dan Theraband Resisted Exercise terhadap Resiko Jatuh dan Keluatan Otot Tungkai pada Lansia".

Sehubungan dengan hal tersebut, mohon kiranya yang bersangkutan diberikan izin untuk melakukan penelitian di instansi yang Bapak/Ibu pimpin.

Atas perkenan dan kerjasamanya diucapkan terima kasih.

a.n. Dekan  
Wakil Dekan Bidang Akademik dan  
Kemahasiswaan



Prof. Baharuddin Hamzah., ST., M.Arch., Ph.D.  
NIP. 196903081995121001

Tembusan Yth:

1. Dekan SPs Unhas "sebagai laporan"
2. Mahasiswa yang bersangkutan;
3. Arsip.



Lampiran 4. Surat Telah Meneliti



**YAYASAN BATARA HATI MULIA**  
**LEMBAGA KESEJAHTERAAN SOSIAL BATARA HATI MULIA**  
**SEKRETARIAT : JL. MALINO BTN BUMI BATARA GOWA BLOK E 20 NO.18**  
**KEL. TOMPOBALANG, KEC.SOMBA OPU, KAB. GOWA, PROP. SULAWESI SELATAN**  
**HP 085299564949 - 085242203097**

SURAT KETERANGAN

Nomor:

Yang bertanda tangan di bawah ini, Ketua Yayasan Batara Hati Mulia Kabupaten Gowa menerangkan bahwa:

Nama : Nindrahayu

Tempat/Tanggal Lahir : Libukang, 5 Septembher 1990

Alamat : BTP Blok J 431B Kelurahan Buntusu Kecamatan Tamalanrea Kota Makassar

Bahwa nama yang telah disebutkan di atas benar telah menyelesaikan penelitian dengan judul “**Perbandingan Efektifitas Balance Strategy Exercise dan Theraband Resisted Exercise terhadap Kekuatab Otot Tungkai dan Resiko Jatuh pada Lansia**”.

Demikian surat keterangan ini dibuat untuk dipergunakan seperlunya.

Makassar, 18 April 2023

Ketua Yayasan Batara Hati Mulia

  
IRYANTI, SKM, S.ft, Physio  
NIP.197100011996022005

Lampiran 5. Hasil Analisis Data (SPSS)

**1. Analisis Deskriptif**

a. Elastic Band (Theraband) Exercise

**Frequency Table**

		JenisKelamin			Cumulative
		Frequency	Percent	Valid Percent	Percent
Valid	Laki-laki	3	14.3	14.3	14.3
	Perempuan	18	85.7	85.7	100.0
	Total	21	100.0	100.0	

		Usia			Cumulative
		Frequency	Percent	Valid Percent	Percent
Valid	60-65 tahun	9	42.9	42.9	42.9
	66-70 tahun	7	33.3	33.3	76.2
	71-75 tahun	5	23.8	23.8	100.0
	Total	21	100.0	100.0	

		TekananDarah			Cumulative
		Frequency	Percent	Valid Percent	Percent
Valid	Normal	21	100.0	100.0	100.0

		IMT			Cumulative
		Frequency	Percent	Valid Percent	Percent
Valid	Normal	21	100.0	100.0	100.0

Descriptive Statistics						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
BeratBadan	21	13.00	50.00	63.00	58.5238	3.18777
TinggiBadan	21	10.00	153.00	163.00	158.5238	2.82168
DN	21	17.00	70.00	87.00	76.8095	4.23815

ZonaLatihanMinimal	21	20.00	115.00	135.00	122.7619	4.49338
ZonaLatihanMaksimal	21	21.00	130.00	151.00	138.0476	4.65270
Valid N (listwise)	21					

b. Balance Strategy Exercise

### Frequency Table

		JenisKelamin			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Laki-laki	5	23.8	23.8	23.8
	Perempuan	16	76.2	76.2	100.0
	Total	21	100.0	100.0	

		Usia			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	60-65 tahun	9	42.9	42.9	42.9
	66-70 tahun	7	33.3	33.3	76.2
	71-75 tahun	5	23.8	23.8	100.0
	Total	21	100.0	100.0	

		TekananDarah			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Normal	21	100.0	100.0	100.0

		IMT			
		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	Normal	21	100.0	100.0	100.0

Descriptive Statistics						
	N	Range	Minimum	Maximum	Mean	Std. Deviation
BeratBadan	21	21.00	49.00	70.00	58.2381	6.21212
TinggiBadan	21	18.00	151.00	169.00	159.4762	5.37233
DN	21	14.00	67.00	81.00	74.0952	3.59033



ZonaLatihanMinimal	21	16.00	113.00	129.00	120.1905	3.97013
ZonaLatihanMaksimal	21	19.00	126.00	145.00	135.3333	4.47586
Valid N (listwise)	21					

## 2. Uji Normalitas

### a. Elastic Band Exercise

	Tests of Normality					
	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	df	Sig.
PreTUG	.214	21	.013	.878	21	.013
Pre30SCS	.171	21	.109	.927	21	.122
PostTUG	.261	21	.001	.850	21	.004
Post30SCS	.188	21	.051	.883	21	.017
SelisihTUG	.204	21	.023	.913	21	.063
Selisih30SCS	.263	21	.001	.854	21	.005

a. Lilliefors Significance Correction

### b. Balance Strategy Exercise

	Tests of Normality					
	Kolmogorov-Smirnov <sup>a</sup>			Shapiro-Wilk		
	Statistic	df	Sig.	Statistic	Df	Sig.
PreTUG	.220	21	.009	.898	21	.033
Pre30SCS	.249	21	.001	.893	21	.025
PostTUG	.243	21	.002	.878	21	.013
Post30SCS	.127	21	.200*	.963	21	.584
SelisihTUG	.233	21	.004	.878	21	.013
Selisih30SCS	.264	21	.000	.848	21	.004

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

a. Lilliefors Significance Correction

### 3. Analisis Data

a. Uji pengaruh sebelum dan sesudah pemberian Elastic Band Exercise terhadap nilai TUG & 30SCS

		Statistics			
		PreTUG	PostTUG	Pre30SCS	Post30SCS
N	Valid	21	21	21	21
	Missing	0	0	0	0
Mean		15.0000	10.5238	8.1429	11.9048
Median		15.0000	10.0000	8.0000	12.0000
Mode		15.00	10.00	8.00 <sup>a</sup>	12.00 <sup>a</sup>
Std. Deviation		1.51658	1.43593	1.31475	1.78619
Range		8.00	4.00	5.00	5.00
Minimum		11.00	9.00	5.00	9.00
Maximum		19.00	13.00	10.00	14.00

a. Multiple modes exist. The smallest value is shown

### Wilcoxon Signed Ranks Test

		Ranks		
		N	Mean Rank	Sum of Ranks
PostTUG - PreTUG	Negative Ranks	21 <sup>a</sup>	11.00	231.00
	Positive Ranks	0 <sup>b</sup>	.00	.00
	Ties	0 <sup>c</sup>		
	Total	21		
Post30SCS - Pre30SCS	Negative Ranks	0 <sup>d</sup>	.00	.00
	Positive Ranks	21 <sup>e</sup>	11.00	231.00
	Ties	0 <sup>f</sup>		
	Total	21		

a. PostTUG < PreTUG

b. PostTUG > PreTUG

c. PostTUG = PreTUG

d. Post30SCS < Pre30SCS

e. Post30SCS > Pre30SCS

f. Post30SCS = Pre30SCS

### Test Statistics<sup>a</sup>

	PostTUG - PreTUG	Post30SCS - Pre30SCS
Z	-4.058 <sup>b</sup>	-4.094 <sup>c</sup>
Asymp. Sig. (2-tailed)	.000	.000

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

c. Based on negative ranks.

b. Uji pengaruh sebelum dan sesudah pemberian Balanced Strategy Exercise terhadap nilai TUG & 30SCS

### Statistics

		PreTUG	PostTUG	Pre30SCS	Post30SCS
N	Valid	21	21	21	21
	Missing	0	0	0	0
Mean		15.1905	12.7619	7.4762	10.2381
Median		15.0000	13.0000	7.0000	10.0000
Mode		15.00	13.00	7.00	9.00
Std. Deviation		1.80607	1.41084	1.03049	1.86828
Range		9.00	7.00	4.00	7.00
Minimum		11.00	10.00	6.00	7.00
Maximum		20.00	17.00	10.00	14.00

### Wilcoxon Signed Ranks Test

#### Ranks

		N	Mean Rank	Sum of Ranks
PostTUG - PreTUG	Negative Ranks	21 <sup>a</sup>	11.00	231.00
	Positive Ranks	0 <sup>b</sup>	.00	.00
	Ties	0 <sup>c</sup>		
	Total	21		
Post30SCS - Pre30SCS	Negative Ranks	0 <sup>d</sup>	.00	.00
	Positive Ranks	21 <sup>e</sup>	11.00	231.00
	Ties	0 <sup>f</sup>		
	Total	21		

a. PostTUG < PreTUG

- b. PostTUG > PreTUG
- c. PostTUG = PreTUG
- d. Post30SCS < Pre30SCS
- e. Post30SCS > Pre30SCS
- f. Post30SCS = Pre30SCS

**Test Statistics<sup>a</sup>**

	PostTUG - PreTUG	Post30SCS - Pre30SCS
Z	-4.053 <sup>b</sup>	-4.044 <sup>c</sup>
Asymp. Sig. (2-tailed)	.000	.000

- a. Wilcoxon Signed Ranks Test
- b. Based on positive ranks.
- c. Based on negative ranks.

c. Uji pengaruh sebelum dan sesudah pemberian Elastic Band Exercise terhadap nilai TUG & 30SCS berdasarkan karakteristik sampel Jenis Kelamin, Usia, IMT

- Laki-laki

**Statistics**

		PreTUG	Pre30SCS	PostTUG	Post30SCS
N	Valid	3	3	3	3
	Missing	0	0	0	0
Mean		15.6667	8.0000	10.6667	11.6667
Median		14.0000	8.0000	10.0000	11.0000
Mode		14.00	7.00 <sup>a</sup>	9.00 <sup>a</sup>	10.00 <sup>a</sup>
Std. Deviation		2.88675	1.00000	2.08167	2.08167
Range		5.00	2.00	4.00	4.00
Minimum		14.00	7.00	9.00	10.00
Maximum		19.00	9.00	13.00	14.00

- a. Multiple modes exist. The smallest value is shown

**Wilcoxon Signed Ranks Test**

**Ranks**

		N	Mean Rank	Sum of Ranks
PostTUG - PreTUG	Negative Ranks	3 <sup>a</sup>	2.00	6.00
	Positive Ranks	0 <sup>b</sup>	.00	.00

	Ties	0 <sup>c</sup>		
	Total	3		
Post30SCS - Pre30SCS	Negative Ranks	0 <sup>d</sup>	.00	.00
	Positive Ranks	3 <sup>e</sup>	2.00	6.00
	Ties	0 <sup>f</sup>		
	Total	3		

- a. PostTUG < PreTUG
- b. PostTUG > PreTUG
- c. PostTUG = PreTUG
- d. Post30SCS < Pre30SCS
- e. Post30SCS > Pre30SCS
- f. Post30SCS = Pre30SCS

### Test Statistics<sup>a</sup>

	PostTUG - PreTUG	Post30SCS - Pre30SCS
Z	-1.604 <sup>b</sup>	-1.633 <sup>c</sup>
Asymp. Sig. (2-tailed)	.109	.102

- a. Wilcoxon Signed Ranks Test
- b. Based on positive ranks.
- c. Based on negative ranks.

- Perempuan

### Statistics

	PreTUG	Pre30SCS	PostTUG	Post30SCS
N	Valid	18	18	18
	Missing	0	0	0
Mean	14.8889	8.1667	10.5000	11.9444
Median	15.0000	8.0000	10.0000	12.0000
Mode	15.00	8.00 <sup>a</sup>	10.00	12.00
Std. Deviation	1.27827	1.38267	1.38267	1.79778
Range	6.00	5.00	4.00	5.00
Minimum	11.00	5.00	9.00	9.00
Maximum	17.00	10.00	13.00	14.00

- a. Multiple modes exist. The smallest value is shown

## Wilcoxon Signed Ranks Test

		Ranks		
		N	Mean Rank	Sum of Ranks
PostTUG - PreTUG	Negative Ranks	18 <sup>a</sup>	9.50	171.00
	Positive Ranks	0 <sup>b</sup>	.00	.00
	Ties	0 <sup>c</sup>		
	Total	18		
Post30SCS - Pre30SCS	Negative Ranks	0 <sup>d</sup>	.00	.00
	Positive Ranks	18 <sup>e</sup>	9.50	171.00
	Ties	0 <sup>f</sup>		
	Total	18		

- a. PostTUG < PreTUG
- b. PostTUG > PreTUG
- c. PostTUG = PreTUG
- d. Post30SCS < Pre30SCS
- e. Post30SCS > Pre30SCS
- f. Post30SCS = Pre30SCS

### Test Statistics<sup>a</sup>

	PostTUG - PreTUG	Post30SCS - Pre30SCS
Z	-3.765 <sup>b</sup>	-3.829 <sup>c</sup>
Asymp. Sig. (2-tailed)	.000	.000

- a. Wilcoxon Signed Ranks Test
- b. Based on positive ranks.
- c. Based on negative ranks.

- Usia 60-65 tahun

### Statistics

		PreTUG	Pre30SCS	PostTUG	Post30SCS
N	Valid	9	9	9	9
	Missing	0	0	0	0
Mean		15.0000	8.4444	10.3333	12.3333

Median	15.0000	9.0000	10.0000	12.0000
Mode	15.00	7.00 <sup>a</sup>	10.00	12.00 <sup>a</sup>
Std. Deviation	1.00000	1.23603	1.11803	1.58114
Range	3.00	3.00	3.00	4.00
Minimum	14.00	7.00	9.00	10.00
Maximum	17.00	10.00	12.00	14.00

a. Multiple modes exist. The smallest value is shown

## Wilcoxon Signed Ranks Test

		Ranks		
		N	Mean Rank	Sum of Ranks
PostTUG - PreTUG	Negative Ranks	9 <sup>a</sup>	5.00	45.00
	Positive Ranks	0 <sup>b</sup>	.00	.00
	Ties	0 <sup>c</sup>		
	Total	9		
Post30SCS - Pre30SCS	Negative Ranks	0 <sup>d</sup>	.00	.00
	Positive Ranks	9 <sup>e</sup>	5.00	45.00
	Ties	0 <sup>f</sup>		
	Total	9		

- a. PostTUG < PreTUG
- b. PostTUG > PreTUG
- c. PostTUG = PreTUG
- d. Post30SCS < Pre30SCS
- e. Post30SCS > Pre30SCS
- f. Post30SCS = Pre30SCS

### Test Statistics<sup>a</sup>

	PostTUG - PreTUG	Post30SCS - Pre30SCS
Z	-2.762 <sup>b</sup>	-2.701 <sup>c</sup>
Asymp. Sig. (2-tailed)	.006	.007

- a. Wilcoxon Signed Ranks Test
- b. Based on positive ranks.
- c. Based on negative ranks.

- Usia 66-70 tahun

### Statistics

		PreTUG	Pre30SCS	PostTUG	Post30SCS
N	Valid	7	7	7	7
	Missing	0	0	0	0
Mean		14.7143	7.5714	10.8571	11.7143
Median		15.0000	8.0000	11.0000	12.0000
Mode		16.00	8.00	9.00	9.00 <sup>a</sup>
Std. Deviation		1.79947	1.51186	1.86445	1.97605
Range		5.00	4.00	4.00	5.00
Minimum		11.00	5.00	9.00	9.00
Maximum		16.00	9.00	13.00	14.00

a. Multiple modes exist. The smallest value is shown

### Wilcoxon Signed Ranks Test

#### Ranks

		N	Mean Rank	Sum of Ranks
PostTUG - PreTUG	Negative Ranks	7 <sup>a</sup>	4.00	28.00
	Positive Ranks	0 <sup>b</sup>	.00	.00
	Ties	0 <sup>c</sup>		
	Total	7		
Post30SCS - Pre30SCS	Negative Ranks	0 <sup>d</sup>	.00	.00
	Positive Ranks	7 <sup>e</sup>	4.00	28.00
	Ties	0 <sup>f</sup>		
	Total	7		

a. PostTUG < PreTUG

b. PostTUG > PreTUG

c. PostTUG = PreTUG

d. Post30SCS < Pre30SCS

e. Post30SCS > Pre30SCS

f. Post30SCS = Pre30SCS



### Test Statistics<sup>a</sup>

	PostTUG - PreTUG	Post30SCS - Pre30SCS
Z	-2.375 <sup>b</sup>	-2.456 <sup>c</sup>
Asymp. Sig. (2-tailed)	.018	.014

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

c. Based on negative ranks.

- Usia 71-75 tahun

### Statistics

		PreTUG	Pre30SCS	PostTUG	Post30SCS
N	Valid	5	5	5	5
	Missing	0	0	0	0
Mean		15.4000	8.4000	10.4000	11.4000
Median		15.0000	8.0000	10.0000	11.0000
Mode		14.00 <sup>a</sup>	8.00	10.00	9.00 <sup>a</sup>
Std. Deviation		2.07364	1.14018	1.51658	2.07364
Range		5.00	3.00	4.00	5.00
Minimum		14.00	7.00	9.00	9.00
Maximum		19.00	10.00	13.00	14.00

a. Multiple modes exist. The smallest value is shown

### Wilcoxon Signed Ranks Test

#### Ranks

		N	Mean Rank	Sum of Ranks
PostTUG - PreTUG	Negative Ranks	5 <sup>a</sup>	3.00	15.00
	Positive Ranks	0 <sup>b</sup>	.00	.00
	Ties	0 <sup>c</sup>		
	Total	5		
Post30SCS - Pre30SCS	Negative Ranks	0 <sup>d</sup>	.00	.00
	Positive Ranks	5 <sup>e</sup>	3.00	15.00
	Ties	0 <sup>f</sup>		
	Total	5		

a. PostTUG < PreTUG

- b. PostTUG > PreTUG
- c. PostTUG = PreTUG
- d. Post30SCS < Pre30SCS
- e. Post30SCS > Pre30SCS
- f. Post30SCS = Pre30SCS

### Test Statistics<sup>a</sup>

	PostTUG - PreTUG	Post30SCS - Pre30SCS
Z	-2.041 <sup>b</sup>	-2.041 <sup>c</sup>
Asymp. Sig. (2-tailed)	.041	.041

- a. Wilcoxon Signed Ranks Test
- b. Based on positive ranks.
- c. Based on negative ranks.

- IMT Normal

### Statistics

	PreTUG	Pre30SCS	PostTUG	Post30SCS
N	Valid	21	21	21
	Missing	0	0	0
Mean	15.0000	8.1429	10.5238	11.9048
Median	15.0000	8.0000	10.0000	12.0000
Mode	15.00	8.00 <sup>a</sup>	10.00	12.00 <sup>a</sup>
Std. Deviation	1.51658	1.31475	1.43593	1.78619
Range	8.00	5.00	4.00	5.00
Minimum	11.00	5.00	9.00	9.00
Maximum	19.00	10.00	13.00	14.00

- a. Multiple modes exist. The smallest value is shown

## Wilcoxon Signed Ranks Test

### Ranks

	N	Mean Rank	Sum of Ranks
PostTUG - PreTUG	Negative Ranks	21 <sup>a</sup>	231.00
	Positive Ranks	0 <sup>b</sup>	.00
	Ties	0 <sup>c</sup>	
	Total	21	

Post30SCS - Pre30SCS	Negative Ranks	0 <sup>d</sup>	.00	.00
	Positive Ranks	21 <sup>e</sup>	11.00	231.00
	Ties	0 <sup>f</sup>		
	Total	21		

- a. PostTUG < PreTUG
- b. PostTUG > PreTUG
- c. PostTUG = PreTUG
- d. Post30SCS < Pre30SCS
- e. Post30SCS > Pre30SCS
- f. Post30SCS = Pre30SCS

### Test Statistics<sup>a</sup>

	PostTUG - PreTUG	Post30SCS - Pre30SCS
Z	-4.058 <sup>b</sup>	-4.094 <sup>c</sup>
Asymp. Sig. (2-tailed)	.000	.000

- a. Wilcoxon Signed Ranks Test
- b. Based on positive ranks.
- c. Based on negative ranks.

d. Uji pengaruh sebelum dan sesudah pemberian Balanced Strategy Exercise terhadap nilai TUG & 30SCS berdasarkan karakteristik sampel Usia, Jenis Kelamin, IMT

- Laki-laki

### Statistics

	PreTUG	Pre30SCS	PostTUG	Post30SCS
N	Valid	5	5	5
	Missing	0	0	0
Mean	15.4000	6.8000	13.4000	9.4000
Median	15.0000	7.0000	13.0000	9.0000
Mode	15.00	7.00	13.00	9.00
Std. Deviation	3.20936	.44721	2.50998	1.51658
Range	9.00	1.00	7.00	4.00
Minimum	11.00	6.00	10.00	8.00
Maximum	20.00	7.00	17.00	12.00

## Wilcoxon Signed Ranks Test

		Ranks		
		N	Mean Rank	Sum of Ranks
PostTUG - PreTUG	Negative Ranks	5 <sup>a</sup>	3.00	15.00
	Positive Ranks	0 <sup>b</sup>	.00	.00
	Ties	0 <sup>c</sup>		
	Total	5		
Post30SCS - Pre30SCS	Negative Ranks	0 <sup>d</sup>	.00	.00
	Positive Ranks	5 <sup>e</sup>	3.00	15.00
	Ties	0 <sup>f</sup>		
	Total	5		

a. PostTUG < PreTUG

b. PostTUG > PreTUG

c. PostTUG = PreTUG

d. Post30SCS < Pre30SCS

e. Post30SCS > Pre30SCS

f. Post30SCS = Pre30SCS

### Test Statistics<sup>a</sup>

	PostTUG - PreTUG	Post30SCS - Pre30SCS
Z	-2.041 <sup>b</sup>	-2.121 <sup>c</sup>
Asymp. Sig. (2-tailed)	.041	.034

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

c. Based on negative ranks.

- Perempuan

		Statistics			
		PreTUG	Pre30SCS	PostTUG	Post30SCS
N	Valid	16	16	16	16
	Missing	0	0	0	0
Mean		15.1250	7.6875	12.5625	10.5000
Median		15.0000	8.0000	13.0000	10.5000
Mode		15.00	8.00	13.00	10.00
Std. Deviation		1.25831	1.07819	.89209	1.93218

Range	5.00	4.00	3.00	7.00
Minimum	12.00	6.00	11.00	7.00
Maximum	17.00	10.00	14.00	14.00

## Wilcoxon Signed Ranks Test

### Ranks

		N	Mean Rank	Sum of Ranks
PostTUG - PreTUG	Negative Ranks	16 <sup>a</sup>	8.50	136.00
	Positive Ranks	0 <sup>b</sup>	.00	.00
	Ties	0 <sup>c</sup>		
	Total	16		
Post30SCS - Pre30SCS	Negative Ranks	0 <sup>d</sup>	.00	.00
	Positive Ranks	16 <sup>e</sup>	8.50	136.00
	Ties	0 <sup>f</sup>		
	Total	16		

- a. PostTUG < PreTUG
- b. PostTUG > PreTUG
- c. PostTUG = PreTUG
- d. Post30SCS < Pre30SCS
- e. Post30SCS > Pre30SCS
- f. Post30SCS = Pre30SCS

### Test Statistics<sup>a</sup>

	PostTUG - PreTUG	Post30SCS - Pre30SCS
Z	-3.559 <sup>b</sup>	-3.539 <sup>c</sup>
Asymp. Sig. (2-tailed)	.000	.000

- a. Wilcoxon Signed Ranks Test
- b. Based on positive ranks.
- c. Based on negative ranks.

- Usia 60-65 tahun

### Statistics

		PreTUG	Pre30SCS	PostTUG	Post30SCS
N	Valid	9	9	9	9
	Missing	0	0	0	0
Mean		15.3333	7.5556	13.1111	11.1111
Median		15.0000	7.0000	13.0000	12.0000
Mode		15.00	7.00	13.00	12.00
Std. Deviation		2.39792	1.23603	1.83333	2.02759
Range		9.00	4.00	7.00	6.00
Minimum		11.00	6.00	10.00	8.00
Maximum		20.00	10.00	17.00	14.00

### Wilcoxon Signed Ranks Test

#### Ranks

		N	Mean Rank	Sum of Ranks
PostTUG - PreTUG	Negative Ranks	9 <sup>a</sup>	5.00	45.00
	Positive Ranks	0 <sup>b</sup>	.00	.00
	Ties	0 <sup>c</sup>		
	Total	9		
Post30SCS - Pre30SCS	Negative Ranks	0 <sup>d</sup>	.00	.00
	Positive Ranks	9 <sup>e</sup>	5.00	45.00
	Ties	0 <sup>f</sup>		
	Total	9		

- a. PostTUG < PreTUG
- b. PostTUG > PreTUG
- c. PostTUG = PreTUG
- d. Post30SCS < Pre30SCS
- e. Post30SCS > Pre30SCS
- f. Post30SCS = Pre30SCS

#### Test Statistics<sup>a</sup>

	PostTUG - PreTUG	Post30SCS - Pre30SCS
Z	-2.701 <sup>b</sup>	-2.714 <sup>c</sup>
Asymp. Sig. (2-tailed)	.007	.007

- a. Wilcoxon Signed Ranks Test
- b. Based on positive ranks.
- c. Based on negative ranks.

- Usia 66-70 tahun

		<b>Statistics</b>			
		PreTUG	Pre30SCS	PostTUG	Post30SCS
N	Valid	7	7	7	7
	Missing	0	0	0	0
Mean		15.4286	7.8571	12.5714	10.2857
Median		16.0000	8.0000	12.0000	10.0000
Mode		16.00	8.00	12.00	9.00 <sup>a</sup>
Std. Deviation		1.13389	.69007	.78680	1.11270
Range		3.00	2.00	2.00	3.00
Minimum		14.00	7.00	12.00	9.00
Maximum		17.00	9.00	14.00	12.00

a. Multiple modes exist. The smallest value is shown

## Wilcoxon Signed Ranks Test

		<b>Ranks</b>		
		N	Mean Rank	Sum of Ranks
PostTUG - PreTUG	Negative Ranks	7 <sup>a</sup>	4.00	28.00
	Positive Ranks	0 <sup>b</sup>	.00	.00
	Ties	0 <sup>c</sup>		
	Total	7		
Post30SCS - Pre30SCS	Negative Ranks	0 <sup>d</sup>	.00	.00
	Positive Ranks	7 <sup>e</sup>	4.00	28.00
	Ties	0 <sup>f</sup>		
	Total	7		

- a. PostTUG < PreTUG
- b. PostTUG > PreTUG
- c. PostTUG = PreTUG
- d. Post30SCS < Pre30SCS
- e. Post30SCS > Pre30SCS
- f. Post30SCS = Pre30SCS

### Test Statistics<sup>a</sup>

	PostTUG - PreTUG	Post30SCS - Pre30SCS
Z	-2.428 <sup>b</sup>	-2.401 <sup>c</sup>
Asymp. Sig. (2-tailed)	.015	.016

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

c. Based on negative ranks.

- Usia 71-75 tahun

### Statistics

	PreTUG	Pre30SCS	PostTUG	Post30SCS
N				
Valid	5	5	5	5
Missing	0	0	0	0
Mean	14.6000	6.8000	12.4000	8.6000
Median	15.0000	7.0000	13.0000	9.0000
Mode	15.00	6.00 <sup>a</sup>	11.00 <sup>a</sup>	7.00 <sup>a</sup>
Std. Deviation	1.51658	.83666	1.34164	1.51658
Range	4.00	2.00	3.00	3.00
Minimum	12.00	6.00	11.00	7.00
Maximum	16.00	8.00	14.00	10.00

a. Multiple modes exist. The smallest value is shown

### Wilcoxon Signed Ranks Test

#### Ranks

		N	Mean Rank	Sum of Ranks
PostTUG - PreTUG	Negative Ranks	5 <sup>a</sup>	3.00	15.00
	Positive Ranks	0 <sup>b</sup>	.00	.00
	Ties	0 <sup>c</sup>		
	Total	5		
Post30SCS - Pre30SCS	Negative Ranks	0 <sup>d</sup>	.00	.00
	Positive Ranks	5 <sup>e</sup>	3.00	15.00
	Ties	0 <sup>f</sup>		
	Total	5		

a. PostTUG < PreTUG

b. PostTUG > PreTUG

c. PostTUG = PreTUG



d. Post30SCS < Pre30SCS

e. Post30SCS > Pre30SCS

f. Post30SCS = Pre30SCS

### Test Statistics<sup>a</sup>

	PostTUG - PreTUG	Post30SCS - Pre30SCS
Z	-2.032 <sup>b</sup>	-2.041 <sup>c</sup>
Asymp. Sig. (2-tailed)	.042	.041

a. Wilcoxon Signed Ranks Test

b. Based on positive ranks.

c. Based on negative ranks.

- IMT Normal

### Statistics

		PreTUG	Pre30SCS	PostTUG	Post30SCS
N	Valid	21	21	21	21
	Missing	0	0	0	0
Mean		15.1905	7.4762	12.7619	10.2381
Median		15.0000	7.0000	13.0000	10.0000
Mode		15.00	7.00	13.00	9.00
Std. Deviation		1.80607	1.03049	1.41084	1.86828
Range		9.00	4.00	7.00	7.00
Minimum		11.00	6.00	10.00	7.00
Maximum		20.00	10.00	17.00	14.00

## Wilcoxon Signed Ranks Test

### Ranks

		N	Mean Rank	Sum of Ranks
PostTUG - PreTUG	Negative Ranks	21 <sup>a</sup>	11.00	231.00
	Positive Ranks	0 <sup>b</sup>	.00	.00
	Ties	0 <sup>c</sup>		
	Total	21		
Post30SCS - Pre30SCS	Negative Ranks	0 <sup>d</sup>	.00	.00
	Positive Ranks	21 <sup>e</sup>	11.00	231.00
	Ties	0 <sup>f</sup>		

Total	21		
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- a. PostTUG < PreTUG
- b. PostTUG > PreTUG
- c. PostTUG = PreTUG
- d. Post30SCS < Pre30SCS
- e. Post30SCS > Pre30SCS
- f. Post30SCS = Pre30SCS

### Test Statistics<sup>a</sup>

	PostTUG - PreTUG	Post30SCS - Pre30SCS
Z	-4.053 <sup>b</sup>	-4.044 <sup>c</sup>
Asymp. Sig. (2-tailed)	.000	.000

- a. Wilcoxon Signed Ranks Test
- b. Based on positive ranks.
- c. Based on negative ranks.

e. Uji perbandingan/uji beda selisih pemberian Theraband Resisted Exercise & Balanced Strategy Exercise TUG & 30SCS

### Statistics

		SelisihTUG	Selisih30SCS
N	Valid	21	21
	Missing	0	0
Mean		-4.4762	3.7619
Median		-5.0000	4.0000
Mode		-5.00	4.00
Std. Deviation		1.20909	.99523
Range		5.00	5.00
Minimum		-7.00	1.00
Maximum		-2.00	6.00

### Statistics

		SelisihTUG	Selisih30SCS
N	Valid	21	21
	Missing	0	0
Mean		-2.4286	2.7619

Median	-2.0000	2.0000
Mode	-2.00	2.00
Std. Deviation	1.02817	1.51343
Range	3.00	4.00
Minimum	-4.00	1.00
Maximum	-1.00	5.00

## Mann-Whitney Test

		Ranks		
	Perlakuan	N	Mean Rank	Sum of Ranks
SelisihTUG	Teraband Resisted Exercise	21	13.21	277.50
	Balance Strategy Exercise	21	29.79	625.50
	Total	42		
Selisih30SCS	Teraband Resisted Exercise	21	25.36	532.50
	Balance Strategy Exercise	21	17.64	370.50
	Total	42		

### Test Statistics<sup>a</sup>

	SelisihTUG	Selisih30SCS
Mann-Whitney U	46.500	139.500
Wilcoxon W	277.500	370.500
Z	-4.471	-2.102
Asymp. Sig. (2-tailed)	.000	.036

a. Grouping Variable: Perlakuan

## Test of Homogeneity

### Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
SAMPEL 1	Based on Mean	,924	1	40	,342
	Based on Median	,334	1	40	,567
	Based on Median and with adjusted df	,334	1	39,923	,567
	Based on trimmed mean	,714	1	40	,403

### Test of Homogeneity of Variance

		Levene Statistic	df1	df2	Sig.
SAMPEL	Based on Mean	,026	1	40	,874
	Based on Median	,021	1	40	,887
	Based on Median and with adjusted df	,021	1	39,691	,887
	Based on trimmed mean	,037	1	40	,848

Lampiran 6. Dokumentasi



## Lampiran 7. Riwayat Hidup Penulis

### **RIWAYAT HIDUP PENULIS**

#### Identitas Pribadi

Nama	: Nindrahayu
Tempat/tanggal Lahir	: Libukang/5September 1990
Alamat	: BTP Blok J 431B Makassar
Email	: nindrahayum@yahoo.com
Jurusan	: Ilmu Biomedik Konsentrasi Fisiologi
Fakultas	: Sekolah Pascasarjana
Nama Ayah	: Mahmuddin
Nama Ibu	: Asirah

#### Riwayat Pendidikan

1.1996-2002	: SDN 161 Karya
2.2002-2005	: SLTPN 1 Lilirilai
3.2005-2008	: SMAN 1 Liliriaja
4.2008-2011	: S1 Fisioterapi Universitas Hasanuddin
5.20011-2013	: Profesi Fisioterapi Universitas Hasanuddin
6.2021-2023	: S2 Ilmu Biomedik Konsentrasi Fisiologi