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LAMPIRAN 1: Sintesis Grid

No	Author /Tahun/ Negara	Judul	Tujuan	Study Design	Partisipan		Intervensi		Outcome	Hasil
					Exp	Cont	Exp	Cont		
1	Park et al., (2019). South Korea	Tongue strengthening exercise is effective in improving the oropharyngeal muscles associated with swallowing in community-dwelling older adults in South Korea: A randomized trial	Untuk mengetahui efek Tounge Strengthening Exercise (TSE) pada otot orofaringeal lanjut usia yang tinggal di komunitas	RCT	20	20	Tounge strengthening exercise (TSE)	No treatment	Kekuatan lidah diukur menggunakan Tounge strengthening system (TPS), Ketebalan lidah dan otot suprahyoid diukur menggunakan perangkat ultrasonografi portable	Kelompok eksperimen menunjukkan peningkatan yang signifikan secara statistik dalam kekuatan dan ketebalan otot lidah dalam fase oral (P = 0,001 dan <0,001, masing-masing). Pada fase faring, kelompok eksperimen menunjukkan peningkatan yang signifikan secara statistik pada otot mylohyoid dan digastrik (otot suprahyoid) (masing-masing P = 0,045 dan 0,019). Kelompok kontrol tidak menunjukkan perubahan signifikan secara statistik.
2	Van den Steen et al.,	Tongue-strengthening exercises in healthy	Untuk membandingkan frekuensi latihan	RCT	10	10	Tongue-strengthening exercises 3	Tongue-strengthening exercises 5 kali	Pengukuran kekuatan dengan menggunakan Iowa	eningkatan signifikan dalam MIPA, MIPP, PswalA, dan PswalP

	(2020). Belgia	older adults: effect of exercise frequency – a randomized trial	3 vs 5 kali per minggu pada hasil isometric toungue strengthening exercise pada toungue strengthening during effortful swallowing				kali setiap minggu	setiap minggu.	Oral Performance Instrument (IOPI),	diukur untuk pelatihan 3 dan 5 kali per minggu. Tidak ada perbedaan signifikan pada parameter apa pun yang ditemukan antara kelompok EX3 dan EX5. Tidak ada efek detraining signifikan yang ditemukan setelah 4 atau 8 minggu pada kelompok pengobatan apa pun baik untuk MIPs atau untuk tekanan menelan yang mudah
3	Van den Steen et al., (2019). Belgia	Tongue-Strengthening Exercises in Healthy Older Adults: Does Exercise Load Matter? A Randomized Controlled Trial	Tujuan dari penelitian ini adalah untuk mengetahui efek pelatihan dan detraining dari tiga tingkat beban resistif yang berbeda pada orang dewasa tua yang sehat pada tekanan lidah isometrik maksimum anterior dan posterior (MIPA dan MIPP),	RCT	EG1: 18 EG 2: 16 EG 3: 16	13	Tongue Strength Exercise pada tiga nilai berbeda dari beban resistif	Lip-Strength Exercise	MIP anterior dan posterior diukur pada setiap kelompok. Nilai MIP tertinggi yang diperoleh selama tiga pengulangan dicatat. MIPA dan MIPP dilakukan pada awal, setelah 4 dan 8 minggu pelatihan dan 4 minggu setelah sesi pelatihan terakhir untuk mendokumentasikan kemungkinan efek detraining.	Secara keseluruhan, tidak ada perbedaan yang signifikan dalam perolehan MIPA dan MIPP antara ketiga EG setelah pelatihan selama 4 dan 8 minggu, namun melihat persentase peningkatan TS, beberapa tren dapat diamati. Untuk MIPA, beban yang lebih rendah menghasilkan efek pelatihan yang lebih sedikit, sedangkan beban tinggi memaksimalkan efek, pada 8 minggu pasca

									anterior dan posterior dan untuk memantau nilai tekanan langit-langit selama sesi pelatihan.	
5	Yano et al. (2020) Japan	Effects of Tongue-Strengthening Self-Exercises in Healthy Older Adults: A Non-Randomized Controlled Trial	Penelitian ini bertujuan untuk menyelidiki apakah Tongue-Strengthening Self-Exercises (TSsE) menggunakan alat latihan mandiri penguatan lidah di rumah dapat meningkatkan kekuatan lidah pada lansia yang sehat.	Non-RCT, Quasi-Experimental Study	16	11	TSE dengan mendorong lidah anterior ke langit-langit keras sebanyak 30 kali, 3 kali sehari, 5 hari seminggu, selama 8 minggu dengan menggunakan alat bantu latihan penguat lidah	Health Education	Semua peserta dalam kelompok latihan melakukan TSsE selama 8 minggu menggunakan tongue-strengthening self-exercise tool, MTP maximum tongue pressure, ETP endurance of tongue pressure, EAT-10 Eating Assessment Tool-10, MNA-SF Mini Nutritional Assessment-Short Form	IG menunjukkan peningkatan yang signifikan sebesar 4,1 kPa di MTP (peningkatan 11,53%) dan 4,53 detik dalam ketahanan tekanan lidah (ETP) (peningkatan 99,86%). Selanjutnya, kepatuhan dalam kelompok latihan adalah 99,2%.
6	Namasiyavayam-MacDonald et al. (2017) Canada	Effects of Tongue Strength Training on Mealtime Function in Long-Term Care	Menentukan kelayakan dan keefektifan protokol intervensi penguatan lidah yang dilakukan selama 8 minggu untuk	Quasi-Experimental Study	8 orang Grup A: 4 orang Grup B: 4 orang		Tongue Strengthening Intervention.		kekuatan lidah menggunakan Iowa Oral Performance Instrument (model number 2.1, IOPI Medical), durasi waktu makan, dan asupan makanan Peserta diamati di	Kekuatan lidah anterior dan posterior meningkat secara signifikan dengan terapi. Tidak ada perubahan fungsi waktu makan.

lanjut usia
dengan
gangguan
kognitif ringan
hingga sedang
dalam
pengaturan
perawatan
jangka panjang.
Ukuran hasil
yang diminati
termasuk
kekuatan lidah,
durasi waktu
makan, dan
asupan makanan

serangkaian waktu
makan untuk
menentukan durasi
waktu makan dan
asupan sebelum dan
setelah 16 sesi
pengobatan.

Lampiran 2: Registrasi Prospero

Dear Miss Jannah,

We apologise for the delay in dealing with your registration, an ever-increasing number of applications has led to a backlog and substantial delays for some users.

PROSPERO is currently prioritising submissions related to COVID-19. To enable us to focus on these submissions, and to avoid additional delay, during the pandemic we will automatically publish submissions that have been waiting more than 30 days for registration.

This applies to your systematic review "Effectiveness of Tongue Strength Exercise in Improving Swallowing Function of Elderly with Dysphagia" which was published on our website on Dec 07, 2020.

The records will be published exactly as submitted, without review by the PROSPERO team, so the public record will indicate:

"To enable PROSPERO to focus on COVID-19 registrations during the 2020 pandemic, this registration record was automatically published exactly as submitted. The PROSPERO team has not checked eligibility"

Review owners have always been responsible for the quality and content of PROSPERO records, and high-quality well-written records will continue to speak for themselves.

Your registration number is: CRD42020219382

You are free to update the record at any time, all submitted changes will be displayed as the latest version with previous versions available to public view. Please also give brief details of the key changes in the Revision notes facility and remember to update your record when your review is published. You can log in to PROSPERO and access your records at <https://www.crd.york.ac.uk/PROSPERO>

Best wishes for the successful completion of your review.

Lampiran 3: Protokol Etik Penelitian



KEMENTERIAN PENDIDIKAN DAN KEBUDAYAAN
UNIVERSITAS HASANUDDIN FAKULTAS KEDOKTERAN
KOMITE ETIK PENELITIAN KESEHATAN
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, M.Med,PhD, SpGK TELP. 081241850858, 0411 5780103, Fax : 0411-581431



REKOMENDASI PERSETUJUAN ETIK

Nomor : 778/UN4.6.4.5.31/ PP36/ 2020

Tanggal: 30 November 2020

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

No Protokol	UH20110687	No Sponsor Protokol	
Peneliti Utama	St. Nurfatul Jannah,S.Kep,Ns	Sponsor	
Judul Peneliti	Efektivitas Tongue Strength Exercise (TSE) dalam Meningkatkan Fungsi Menelan pada Usia Lanjut dengan Disfagia : A Systematic Review		
No Versi Protokol	1	Tanggal Versi	30 November 2020
No Versi PSP		Tanggal Versi	
Tempat Penelitian	Fakultas Keperawatan Universitas Hasanuddin Makassar		
Jenis Review	<input checked="" type="checkbox"/> Exempted <input type="checkbox"/> Expedited <input type="checkbox"/> Fullboard Tanggal	Masa Berlaku 30 November 2020 sampai 30 November 2021	Frekuensi review lanjutan
Ketua Komisi Etik Penelitian Kesehatan FKUH	Nama Prof.Dr.dr. Suryani As'ad, M.Sc.,Sp.GK (K)	Tanda tangan 	
Sekretaris Komisi Etik Penelitian Kesehatan FKUH	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 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 prokol yang disetujui (protocol deviation / violation)
- Mematuhi semua peraturan yang ditentukan

Lampiran 4: Pencarian Artikel Database

1. PubMed

The screenshot shows a PubMed search interface. The search query is: `((elderly OR aged OR older OR elder OR geriatric OR elderly people OR old people OR old age OR senior)) AND ((dysphagia OR sw))`. The search results are displayed in a list format. The first result is titled "Breathing Signatures as Vitality Score Index Created by Exercises of Qi Gong: Implications of Artificial Intelligence Tools Used in Traditional Chinese Medicine". The authors listed are Junjie Zhang, Qingping Su, William G. Loudon, Katherine L. Lee, Jane Luo, Brent A. Dethlefs, Shengwen Calvin Li, and J. Funz Morphi Kinesior. The article is published in *J Funct Morphol Kinesiol* in 2019. The second result is titled "The Respiratory Phenotype of Rodent Models of Amyotrophic Lateral Sclerosis and Spino cerebellar Ataxia" by Anna F. Fusco, Angela L. McCall, Justin S. Dhillon, Logan A. Pucci, Laura M. Strickland, Amanda F. Kahn, Mai K. Elmallah, and J. Neuroinflamm Neurodegener Dis. The article is published in *J Neuroinflamm Neurodegener Dis* in 2019. The interface includes filters for article attributes, associated data, and search results. A COVID-19 alert banner is visible at the top.

This screenshot shows the same PubMed search interface as above, but with a different set of search results. The search query remains the same. The first result is titled "The Effects of Electrical Stimulation Pulse Duration on Lingual Palatal Pressure Measures During Swallowing in Healthy Older Adults" by Ali Bankiroo, Karen Heglund, Giselle Carnaby, Donald Bolser, Todd Marini, and Michael Cray. The article is published in *PLoS One* in 2019. The second result is titled "A Randomized Trial Comparing Two Tongue-Pressure Resistance Training Protocols for Post-Stroke Dysphagia" by Caitliona M. Skeels, Mark T. Bayley, Melanie Peladeau-Pigeon, Ahmed Nagy, Ashwin M. Namasivayam, Shauna L. Skokely, and Tala Wolkin. The article is published in *PLoS One* in 2019. The interface includes filters for article attributes, associated data, and search results. A COVID-19 alert banner is visible at the top.

2. ProQuest

The screenshot shows the ProQuest search results page for the query: "(elderly OR aged OR older OR elder OR geriatric OR elderly people OR old people OR old age OR senior) AND (dysphagia OR swallowing disorders OR deglutition disorders OR swallowing dysfunction OR swallowing difficulties) AND (tongue exercises OR lingua exercise OR tongue strength OR lingua strength) AND (improve swallowing function)". The page displays 460 results. On the left, there are filters for "Applied filters" (Scholarly Journals, Last 10 Years), "Show results outside my library's subscription", "Sorted by" (Relevance), and "Limit to" (Full text, Peer reviewed). The main results list includes:

- 1. European Society for Swallowing Disorders – European Union Geriatric Medicine Society white paper: oropharyngeal dysphagia as a geriatric syndrome. Baijens, Laura W.J.; Clavé, Pere; Cras, Patrick; Ekberg, Olle; Forster, Alexandre; et al. *Clinical Interventions in Aging; Auckland* Vol. 11, (2016): 1403-1428. Abstract/Details Full text Full text - PDF (961 KB) Show Abstract
- 2. Frequent Karaoke Training Improves Frontal Executive Cognitive Skills, Tongue Pressure, and Respiratory Function in Elderly People: Pilot Study from a Randomized Controlled Trial. Full Text

This screenshot is identical to the one above, showing the same ProQuest search results page with 455 results. The filters and search query are the same. The main results list includes:

- 1. European Society for Swallowing Disorders – European Union Geriatric Medicine Society white paper: oropharyngeal dysphagia as a geriatric syndrome. Baijens, Laura W.J.; Clavé, Pere; Cras, Patrick; Ekberg, Olle; Forster, Alexandre; et al. *Clinical Interventions in Aging; Auckland* Vol. 11, (2016): 1403-1428. Abstract/Details Full text Full text - PDF (961 KB) Show Abstract
- 2. Frequent Karaoke Training Improves Frontal Executive Cognitive Skills, Tongue Pressure, and Respiratory Function in Elderly People: Pilot Study from a Randomized Controlled Trial. Full Text

3. EBSCO

The screenshot shows the EBSCO search interface. The search query is: elderly or aged or older or elder or geriatric or elderly people or old people or old age c AND dysphagia or swallowing disorders or deglutition disorders OR swallowing dyst AND tongue exercises OR lingua exercise OR tongue strength OR lingua strength AND improve swallowing function. The search results show 1-20 of 113 results. The first result is: "Effect of effortful swallowing training on tongue strength and oropharyngeal swallowing function in stroke patients with dysphagia: a double-blind, randomized controlled trial." The second result is: "Effects of an Intensive Exercise-Based Swallowing Program for Persons With Parkinson's Disease and..."

4. Cochrane Library

The screenshot shows the Cochrane Library search results. The search query is: (#1 - (elderly OR aged OR older OR elder OR geriatric OR elderly people OR old people OR old age OR senior);ti,ab,kw AND (dysphagia OR swallowing disorders OR deglutition disorders OR swallowing dysfunction OR swallowing difficulties);ti,ab,kw AND (tongue exercises OR lingua exercise OR tongue strength OR lingua strength);ti,ab,kw AND (improve swallowing function);ti,ab,kw) (Word variations have been searched). The search results show 23 trials matching the criteria. The first result is: "Tongue Pressure Profile Training for Dysphagia Post Stroke" (NCT01370083). The second result is: "The effect of orofacial myofunctional treatment in children with anterior open bite and tongue dysfunction: a pilot study" (C Van Dyck, A Dekeyser, E Vantricht, E Manders, A Goeleven, S Fleuws, G Willems). The third result is: "Tongue-to-palate resistance training improves tongue strength and oropharyngeal swallowing function in subacute stroke survivors with dysphagia" (HD Kim, JB Choi, SJ Yoo, MY Chang, SW Lee, JS Park).

5. Science Direct

The screenshot shows the ScienceDirect website interface. At the top, there is a navigation bar with the ScienceDirect logo, 'Journals & Books' link, and 'Register' and 'Sign in' buttons. Below this is a search bar containing the query: 'elderly OR older adults OR geriatric AND dysphagia OR swallowing disorders OR deglutition disorders'. The search results are displayed in a list format, showing 829 results. The first two results are highlighted. The first result is a review article titled 'Treatment and evaluation of dysphagia rehabilitation especially on suprahyoid muscles as jaw-opening muscles' from the Japanese Dental Science Review, 8 September 2018, by Koji Hara, Haruka Tohara, and Shunsuke Minakuchi. The second result is an update and review titled 'Update and review of the gerodontology prospective for 2020's: Linking the interactions of oral (hypo-)functions to health vs. systemic diseases' from the Journal of Dental Sciences, available online 17 October 2020, by Yan-Chun G. Liu, Shou-Jen Lin, and Andy Yen-Yung Teng. On the left side, there is a 'Refine by: Years' section with a list of years from 2010 to 2020 and their corresponding number of results. At the bottom, there is a Windows taskbar showing the search bar and several application icons.

ScienceDirect Journals & Books Register Sign in Brought to you by PERPUSTAKAAN NASIONAL RI

Find articles with these terms
elderly OR older adults OR geriatric AND dysphagia OR swallowing disorders OR deglutition disorders
Year: 2018-2020
Title, abstract, keywords: elderly OR older adults OR geriatric AND dysphagia OR swallowing disorders OR deglutition disorders
Advanced search

829 results
Set search alert

Refine by:
Years

- 2020 (150)
- 2019 (85)
- 2018 (97)
- 2017 (81)
- 2016 (84)
- 2015 (77)
- 2014 (96)
- 2013 (58)
- 2012 (34)
- 2011 (38)
- 2010 (29)

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Japanese Dental Science Review 8 September 2018, ...
Koji Hara, Haruka Tohara, Shunsuke Minakuchi
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Update and review of the gerodontology prospective for 2020's: Linking the interactions of oral (hypo-)functions to health vs. systemic diseases
Journal of Dental Sciences, Available online 17 October 2020, ...
Yan-Chun G. Liu, Shou-Jen Lin, Andy Yen-Yung Teng
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A review of **swallow** timing in the elderly

Feedback

Search the web and Windows 12:10 PM 20/12/21