3946-Article Text-16076-1-4-20250531.docx

by Turnitin Ku

Submission date: 05-Jun-2025 05:34PM (UTC+0300)
Submission ID: 2641260948
File name: 3946-Article_Text-16076-1-4-20250531.docx (73.25K)
Word count: 4628
Character count: 24403

Journal Physical Health Recreation (JPHR)
Volume * Nomor * ; Bulan ****
https://jurnal.stokbinaguna.ac.id/index.php/JP
e-ISSN : 2747- 013X

The Effect Of Ginger Drinking On Cardiovascular Endurance In FIKK UNM Futsal Club Players

Hasmyati[1], Nur Indah Atifa Anwar[2]

{Hasmyati@unm.ac.id[1], nurindah@unm.ac.id[2]}

Universitas Negeri Makssar, Jl. Wijaya Kusuma No.14, Banta-Bantaeng, Kec. Rappocini, Kota Makassar, Sulawesi Selatan 90222[1], Universitas Negeri Makssar, Jl. Wijaya Kusuma No.14, Banta-Bantaeng, Kec. Rappocini, Kota Makassar, Sulawesi Selatan 90222[2]

Abstrac.This study aims to determine the effect of ginger drink on cardiovascular endurance in futsal club players Faculty of Sports Sciences Makassar State University (FIK UNM). Cardiovascular endura nce is one of the important aspects that affect athlete performance, and ginger is known to have th e potential to increase body c acity through antioxidant and anti-inflammatory properties. The re search method used in this research is quasi-experiment w pre-test design and post-test Control Group Design. The sample consisted of 20 futsal players divided into two groups: control group (n =10) and treatment group given ginger drink (N =10). Cardiovascular endurance data were mea sured using standar ethods before and after the intervention. The data analysis was done by ind ependent sample t-test to determine the significant differences between the two groups. The result s showed that the average cardiovascular endurance of the control group was 41,58 with a signific ance value of 0,038, while the average treatment group was 36,54 with a significance value of 0,0 41. The average difference in cardiovascular endurance between the two groups was 5,04, which s howed significant differences.

Keyword Ginger drink, Cardiovascular Endurance, Futsal player.

1 Introduction

Cardiovascular resilience is affordability, heart, lung and Blood vessels to promote oxygen and malnutrition to cells to meet physical activity needs in a long time other commonly used term s are respiration-cardio-vascular, yakni resilience associated with breathing, heart, and blood ci rculation (Irvan & Asyhari, n.d.)The sense of resilience is reviewed from muscle work is muscl e work ability or muscle group in a certain period of time, while the sense of resilience i he ener gy system is the work ability of the body organs in a certain period of time the term of endurance in the athletic world is known as the ability of the sportsman's body organ equipment to fight the f atigue during its resistance or physical work. If want to drive good lung vital capacity then we sho uld also have cardiovascular endurance Which is good for holding as much oxygen as possible and distributing it to the body. When lung vital capacity and cardiovascular endurance have entered its peak and continue to force for physic al activity it can

.
Correspondence author: First Author/Second Author/Third Author, Medan State University, Indonesia.
Email:

cause the onset of lactic acid in the muscles. When the accumulation of lactic aci d in the body, oxygen is no longer able to be supplied to the muscles causing fatigue (APRILIANTO, n.d.).

Cardiovascular endurance can be achieved by doing sports involving large muscles with c ontinuous rhythmic movement such as walking, running, swimming, cycling and so forth (Cium\uarnean et al., 2021) For endurance enhancement can also be obtained with a similar beverage extract and su pplement drinks that contain certain vitamins and nutrients and pour me Ginger has a good conten t for endurance. This is widely trusted by sports coaches by giving supplement drinks to athletes d uring training, before physical activity or after physical activity. It is an interesting study to study. Cardiovascular endurance is one of the important components in physical fitness, especially for at hletes involved in sports that require stamina and high body resistance such as futsal (Hartono et al., 2024). Good cardiovascular endurance can improve the body's ability to adapt to intense physic al activity, reduce fatigue, and accelerate recovery after exercise. Therefore, futsal athletes need to maintain and improve their cardiovascular endurance in order to perform optimally in every game. One approach that can be used to increase cardiovascular endurance is to utilize natural ingredie nts, such as ginger. Ginger is known to have a variety of health benefits, including the ability to i mprove blood circulation, reduce inflammation, and boost metabolism. Some studies have shown that ginger can have a positive effect on heart and blood vessel health, which is directly related to cardiovascular function (Nopriani & Riadi, 2024).

Ginger drink has long been used in traditional medicine for a variety of health benefits, inc luding in improving cardiovascular endurance. Ginger contains active compounds, such as ginger ol and shogaol, which have anti-bacterial properties Inflammatory, antioxidant, and vasodilator, which potentially positively impact the health of the h eart and circulatory system. According to (Amin et al., 2024) here are some benefits of ginger dri nk against cardiovascular endurance: 1. Ginger can help improve blood circulation by dilating blo od vessels, which allows blood to flow more smoothly throughout the body. This increase in bloo d flow will support more efficient delivery of oxygen and nutrients to muscles and organs, which i s crucial for body performance during physical activity, including in sports. 2. some studies sugge st that ginger may help lower blood pressure, especially in individuals with hypertension. Ginger helps to dilate blood vessels and increase their elasticity, which serves to naturally lower blood pr essure. Controlled blood pressure is essential in maintaining heart health and increasing cardiovas cular endurance. 3. the compounds in ginger can increase the capacity of blood to carry oxygen, w hich in turn can increase stamina and endurance. It is beneficial for athletes, including futsal playe rs, who require oxygen to generate energy in intense physical activity. 4. ginger acts as an antioxi dant that protects the heart from damage due to free radicals. By fighting inflammation and oxidat ion in the body, ginger helps maintain heart function and prevents the risk of heart disease. A heal thy heart condition will certainly support endurance in the face of heavy physical activity. 5. ging er has anticoagulant effect, which can prevent excess blood clotting. Uncontrolled blood clots ma y limit blood flow to vital organs, including the heart, and may increase the risk of cardiovascular disease. By consuming ginger drink, it can help maintain smooth blood flow in the body. With these benefits, ginger drinks can be an effective natural option for enhancing cardiov ascular endurance. For athletes or individuals involved in sports that require the body to work har d for a long time, such as futsal, regular consumption of ginger can provide gains in improving ph ysical performance and accelerate recovery after activity. With knowledge about the benefits of dr inking ginger for

Cardiovascular improvement then researchers took samples on sports players Futsal.Futsal, as a sport that requires speed, agility, and endurance, requires special attention to

t he physical aspects, especially cardiovascular endurance (Sekulic et al., 2021). Futsal players mus t have an efficient circulatory system to support physical activity that takes place in a fast tempo. Therefore, it is important to explore whether the provision of ginger-based drinks can affect the in crease of cardiovascular endurance of futsal players, especially the futsal club players of Facult y of Sports Sciences Makassar State University (FIK UNM). This study aimed to examine the eff ect of ginger drink on cardiovascular endurance in futsal players FIK UNM. The results of this stu dy are expected to contribute to the knowledge about alternative physical performance improveme nt of futsal athletes through the consumption of natural materials that are easily accessible and eff ective.

2 Method

The method used in this research is an experiment with two- group pretest-posttest design (Pasaribu, 2020). Experimental research method is a method used to determine the effect of a parti cular treatment on other treatments under controlled conditions. This study was a pre-experimenta l study wi pretest and post test group design. The sample of this research is 10 male spear pele mpar. The sample of this research is all of the students of the University of Makassar. At random, the samples were classified into groups, 10 futsal club athletes FIK UNM and 10 students non-F IK UNM. The shape of the design in question is as shown in the picture below:

Table 1. Two-group pretest-posttest research design

Pretest	Treatment	Posttest
	X1	O_2
O_1	X_2	

Sumber (Susilawati, 2018)

This study uses the instrument test which is bleep test (also known as multi-stage fitness te st or 20 meters shuttle run test). is a test used to measure cardiovascular capacity and aerobic en durance of a person (Atty et al., 2024). This test measures the extent to which a person's body can endure intense and progressive physical activity, as required in futsal sports. To measure the ef fect of ginger drink on cardiovascular endurance of futsal players at Futsal Club FIK UNM, blee p test can be used as an instrument to assess the increase of cardiovascular endurance after regul ar consumption of ginger drink. The following steps can be used in this study to perform bleep t est (Duhe et al., 2024):

1. Preparation Before Tes

   a. Subject preparation: make sure futsal players are in good shape and ready for physical tests. Make sure t hey are not in a state of fatigue or have health problems that can inhibit the test.

   b. Environmental conditio ns: prepare field or long enough area, at least 20 meters, which will be used in the test.

   c. Required tools: a udio recording bleep test (which contains beeps that get faster as time passes). Tape measure for marking d istance of 20 meters. Stopwatch to monitor time if needed.

2. Measurement before giving jahe drink (pre-test). Early bleep test: before giving intervention (ginger drink), do bleep test to measure the player's initial cardiovascular endurance. The player will run back and forth between t wo points as far as 20 meters according to the rhythm of the beep.

3. intervention administration (ginger drink)

   a. Ginger drink consumption plan: determine the pattern of consumption of ginger drink to be given. For exa mple, players will consume ginger drinks one hour before training or futsal games in the period Specific time (e.g. 2 weeks, 4 weeks, or according to research design).

   b. Ginger dri nk quantity: determine the consistent amount to consume, for example 150-200 ml per d ay.

   c. Consumption schedule: determine the time of consumption of ginger drinks (eg e very morning or before exercise).

4. Implementation of bleep test after giving ginger drink (post-test). Repeat bleep test: After the ginger drink feeding period is completed, re-perform the same bleep test on the player. Players will again conduct tests to assess their improved cardiovascular endurance after consu mption of ginger drink.

3 Result

In Table 2 this will explain the results of data processing in SPSS test with descriptive ana lysis test that aims to see the picture of the initial data or the description of the data in the test.

Table 2. Descriptive test of the influence of ginger drink on cardiovascular endurance in futsal club FIK UNM

Variabel	N	Minimum	Maximum	Sum	Mean	Std. Deviation
Pre tes Minum Jahe	10	31.40	47.40	392.80	39.2800	5.43503
Post tes Minum Jahe	10	34.30	51.10	415.80	41.5800	6.01938
Pre tes bebas	10	31.40	41.20	360.50	36.0500	3.63234

In this study, there are two types of tests measured, namely tests related to ginger consu mption and freedom-related tests (which may refer to other variables, such as physical or mental freedom). The data obtained are divided into two periods Measurements, namely pre test (before intervention) and post test (after intervention). In this res earch is described as follows:

1. Control Group
   a. Pre test ginger drink: the value of pre test ginger drink showed varying results with minimum value of 31.40 and maximum 47.40. The total sum of the Pre test value is 392.80, with an average (mean) of 39.28. The variation of the values recorded

is quit e large, with standard deviation of 5.44, showed a significant difference in individual response to ginger drink at the beginning of the measurement.

b. Post test drink ginger: after the intervention, that is, consumption of ginger, post test value showed a slight increase. The minimum value was recorded at 34.30, and the maximum value reached 51.10. The total summation of the post test value was 415.8 0, with an average of 41.58. The average of these values is higher than that of pre-tes t, indicating a positive effect of intervention. However, variations between individual s (standard deviation of 6.02) were slightly greater than those of pre tests, which may indicate greater response differences after ginger consumption.

2. Free group

a. Pre f13 test: Before the intervention, the value of the free test showed a variation with a minimum value of 31.40 and a maximum of 41.20, with a total sum value of 3 60.50. The average for pre free test was 36.05, with standard deviation of 3.63, whic h showed moderate variation between participants.

b. 14st free test: after the intervention, the value of post free test slightly increased, with a minimum value of 31.50 and a maximum of 41.70. The total sum of free post t est score is 365.40, with an average of 36.54, Higher than with Pre test. The average increase is relatively small, but it shows p ositive changes. Variation among individuals in post free test was slightly greater, with standard deviation of 3.83, which showed that although the average increas ed, differences between participants varied more after intervention.

In this table 3 will explain the results of the data in the SPSS test with the test (K-SZ) the objective is to see the data distributed normally or not with the provision of P >0.05 a s follows:

Table 3. Normality test effect of ginger drink on cardiovascular endurance in futsal club players FIK UNM

	Kolmogorov-Smirnov[a]			Shapiro-Wilk		
Variabel	Statistic	df	Sig.	Statistic	df	Sig.
PRETEST	.159	20	.200*	.932	20	.171
POSTETS	.189	20	.059	.939	20	.231

In this study, the data were analyzed using two different statistical tests, Kolmogorov -Smirnov and Shapiro-Wilk. Both of these tests are used to determine whether the data o btained follows normal distribution.

1. Pretes

Kolmogorov-Smirnov test: statistical value obtained was 0.159 with a significance va lue (sig) of 0.200. A greater significance value of this 0.05 indicates that pretes data is n ot significantly different from normal distribution. Therefore, it can be concluded that th e pretes data were normally distributed and Shapiro-Wilk test: the statistical value obtain

ed was 0.932 with significance value (sig) of 0.171. A significance value greater than 0.05 also indicates that pretes data are distributed normally.

2. Posts

Kolmogorov-Smirnov test: statistical value obtained was 0.189 with a significance value (sig) of 0.059. Although this significance value is slightly lower than that of the pretes test, this value is still greater than 0.05, which means that the postes data is not significantly different from the normal distribution. Therefore, the Post data is distributed normally and Shapiro-Wilk test: the statistical value obtained is 0.939 with a significance value (sig) of 0.231. Same as in the Kolmogorov-Smirnov test, a significance value greater than 0.05 indicates that the postes data are distributed normally.

The results of this study showed that the effect of ginger drink on cardiovascular endurance in futsal club player FIK UNM obtained was normal distribution. Next in Table 4 will explain if the data in SPSS test with variance homogeneity test above shows that the data has a different diversity is not significant with the provision of P >0,05 as follows:

Table 4. Homogeneity Test effect of ginger drink on cardiovascular endurance in futsal club FIK UNM

Test of Homogeneity of Variances

Levene Statistic	df1	df2	Sig.
1.328	1	18	.264

Based on the output table "test of homogeneity of variations" above is known significance value (sig.) the variables of homogeneity test result of the influence of ginger drink on cardiovascular endurance in futsal club players FIK UNM control group and free Group was 0,264. Because of it. 0,264 >0,05, then as the basis of decision making in the test of homogeneity above, it can be concluded that the variance of ginger drink data on cardiovascular endurance in Club players Futsal FIK UNM control group and free group is equal or homogeneous.

The data of this research are analyzed using Descriptive Qualitat Method. The data used in this research is Descriptive Qualitative method. This test helps to determine whether there are statistically significant differences between the average of the two groups, from the results of the data as follows:

Table 5. Independent sample T test the effect of ginger drink on cardiovascular endurance in futsal club players FIK UNM

	Test	N	Mean	Std. Deviation	Std. Error Mean
Variabel	Kelompok kontrol	10	41.5800	6.01938	1.90349

Kelompok bebas	10	36.5400	3.82744	1.21034

Based on the output table "group Statistics" above is known the number of learni ng outcomes data for the control group is as many as 10 athletes, while for the free group is as many as 10 athletes. The average value of futsal athlete FIK UNM mean for control group is 41.5800, while for free group is 36.5400. Thus, it can be concluded that there ar e differences in the average effect of ginger drink on cardiovascular endurance in futsal club FIK UNM players. Further to prove whether the difference means significant (real) or not then we need to interpret the output as follows.

Table 6. Independent sample T test the effect of ginger drink on cardiovascular endurance in futsal club players FIK UNM

Variabel	N	Mean	Sig.
Kelompok Kontrol	10	41.5800	.038
Kelompok Bebas	10	36.5400	.041
Selisi		5.04000	

Independent sample t-test was performed to compare the average between control group and free group. Here are the results of the analysis:

1. Control group N/number of samples of 10 athletes had an average of 41,58 and significancevalue for the control group was 0,038, since the significance value of the control group is belo w the threshold α=0,05 \ alpha =0,05 α=0,05, it can be concluded that there is a significant dif ference between the average of konrtol group.
2. Free group N/total sample of 10 athletes had an average of 36,54, for an average of free Group was 0,041, and since the significance value of the free group is below the α=0,05 \ alpha = 0,05 α=0,05 threshold, it can be concluded that there is a significant difference between the av erage of the free group.
3. Conclusion data of control group and free group with average control has an average of 41,58, free group has an average of 36,54, so that have an average difference between the two gro ups is 5,04.

4 Discussion

This study aimed to determine the effect of ginger drink on cardiovascular endurance in fu tsal club p ers of Faculty of Sports Sciences (FIK) Makassar State University (UNM). Cardiova scular endurance is one An important component in athlete performance, especially in futsal sports that require high stami na and optimal physical performance. The results showed that there were significant differences in cardiovascular endurance bet ween the group who consumed ginger drink (free group) and the control group. The group given g inger drink had an average cardiovascular endurance value of 41,58, while the control group had a n average of

36,54. The average difference of 5,04 showed improved endurance in the group receiving treatment. The significance value of the statistical test was 0,038 for the control group and 0,041 for the free group. Since P <0,05P <0,05P <0,05, this difference is considered statistically significant, meaning that the administration of ginger drinks has a positive effect on cardiovascular endurance.

Ginger is a type of spice that became one of the export commodities traded in the form of fresh ginger, dried ginger process (dried or Pikel), essential oil or oleoresin. There are three main types of ginger in Indonesia, namely Red Ginger, elephant ginger (rhino ginger), and small white ginger (ginger syringe). These three types are based on the shape, size, and color of ginger (Nopriani & Riadi, 2024). Ginger can be used as a drink, and in Indonesia ginger drink is a type of drink that is quite popular in the community. Ginger drink is a drink made from the juice of ginger rhizomes cooked and added sugar. Ginger drink bandrek (sarconsisting) is generally made from red ginger and sugar by adding several types of spices, so it has a spicy, sweet, and distinctive spice aroma. Red Ginger has a more pungent taste and has a higher content of essential oils than elephant ginger and an empret. Red Ginger is commonly used as a refreshing drink and source of essential oils (Amin et al., 2024). Ginger drinks are generally consumed in a warm state, so the presentation requires a container that must continue to remain hot. Ginger is one of the spices that have been widely known by the public. Ginger (Zingiber officinale) is known to contain bioactive compounds such as gingols and shogaol which have antioxidant and anti-inflammatory properties. Both of these compounds are thought to help improve cardiovascular function through: increasing blood flow by dilating blood vessels. Reducing

Possible inflammation due to heavy physical exertion. Decreases oxidative stress, thus acceleratin g recovery after intensive training (cahyani astiningtias, 2023). In addition to being a flavor-producing in a variety of products, jahe is also known to have nourishment heals various kinds of diseases such as anigin, cough, diarrhea so it is good for body endurance. Some bioactive components in jahe ekastrak among others (6)-gingerol, (6)-shogaol, diarilheptanoid and curcumin have antioxidant activity that exceeds tocopherol (Wulandari & Syahrul, 2022). In crop taxonomy, jahe emprit has oil content atsiri around 1,5%-3,5% and 2,58%,3,90 %. This jahe is widely used as spices, food silvers, drinks and medicinal raw materials. Mahluk li ved closely with his ability to perform physical activity well to protect themselves and meet the needs of life. Physical activity according to (Bompa & Buzzichelli, 2019) is all kinds of body movements produced by skeletal muscles that require energy production. In addition to the main components in the production of energy, physical activity is also impaired in the balance of energy and body composition.

Performing daily activities person requires the condition of the body in a state of fitness. Some of the ways that a person does to get fitness, such as adjusting a diet, taking adequate breaks and doing sports activities regularly and regularly. Endurance is the body's ability to work for long periods without experiencing fatigue which means after completing a job. Endurance is generally defined as fatigue fatigue and recovery ability immediately after experiencing fatigue (Ilyas et al., 2024). High durability dapat mempertahankan penemilan over a relatively long period of time continuously. Thue endurance contributes to improving and increasing presasi Dan limiting fatigue Tingkat. Cardiorespiratory endurance associated with blood circulation and breathing. Cardiorespiratory endurance is the ability of the heart, lungs, blood vessels to supply oxygen to the cells so as to meet the need to prolong physical

activity. A person who has good cardiorespiratory endurance will not easily experience fatigue after doing activities. Cardiorespiratory endurance can be measu red through VO2max levels are achieved, so if VO2max levels are high then physical fitness is also good.

The difference in individual VO2max usually influenced by three things, namely internal r espiration, air transport cardiovascular system, and external respiration. These three factors accord ing to the theory of rentice and Bucher who said that the difference means between individuals is l owered by the work of three systems in the body namely (Deliceo\uglu et al., 2024): external resp iration (lung function), air transport cardiovascular system such as heart, blood vessels, and blood, internal respiration (The use of oxygen by body cells for energy production) ginger drink can be u sed as a natural intervention that is easy to apply increase cardiovascular endurance in futsal ath letes. This is important considering futsal is a sport that requires a high level of stamina to maintai n optimal performance during the game.

5 Conclusion

In this chapter will be s d about the conclusion of the research results as the final purpo se of the research obtained based on the data of the research results. From the conclusion of this st udy, recommendation ill be presented in the form of suggestions for implementation and devel opment of research results. Based on the results of the research, it can be concluded that the provi sion of ginger drink has a significant effect on cardiovascular endurance of futsal club player FIK UNM. This was shown through da analysis comparing control group and treatment group (ginge r beverage administration). The results of independent sample t-test showed that there were signifi cant differences in average cardiovascular endurance between the two groups. The group given gi nger drink showed increased Better cardiovascular endurance compared to the control group. Thus, the consumption of ginger drink can be used as an effective alternative intervention to increase cardiovascular endurance in f utsal players. Further research is needed to identify the mechanism of action of ginger in increasin g cardiovascular capacity as well as explore its optimal dose.

References

Amin, S., Cahya, N. A., Rachmat, S. W., Adri, A., & Amelya, I. N. (2024). Tanaman Lingkungan Sebagai Penyembuhan Penyakit. PT. Sonpedia Publishing Indonesia.

APRILIANTO, K. (n.d.). PENGARUH LATIHAN MULTILATERAL TERHADAP DAYA TAHAN AEROBIK ANAK USIA 9--12 TAHUN DI KLUB PANJAT TEBING NUSANTARA SPORT CLIMBING (NSC) YOGYAKARTA.

Atty, J. C., Rohi, I. R., Nafie, A. J., Mae, R. M., & Lika, J. K. (2024). Aerobic Endurance Capacity (Vo_2Max) Using Bleep Test on Students of Pjkr Study Programme. Halaman Olahraga Nusantara: Jurnal Ilmu Keolahragaan, 7(1), 134–144.

Bompa, T. O., & Buzzichelli, C. (2019). Periodization-: theory and methodology of training. Human kinetics.

CAHYANI ASTININGTIAS, L. (2023). STUDI LITERATUR: KOMPRES JAHE UNTUK MENURUNKAN NYERI SENDI PADA LANSIA. Universitas Muhammadiyah Ponorogo.

Cium\uarnean, L., Milaciu, M. V., Negrean, V., Or\uaşan, O. H., Vesa, S. C., S\ual\uagean, O.,

Ilu\ct, S., & Vlaicu, S. I. (2021). Cardiovascular risk factors and physical activity for the prevention of cardiovascular diseases in the elderly. International Journal of Environmental Research and Public Health, 19(1), 207.

Deliceo\uglu, G., Kabak, B., Çak\ir, V. O., Ceylan, H. \. I., Raul-Ioan, M., Alexe, D. I., & Stefanica, V. (2024). Respiratory Muscle Strength as a Predictor of VO2max and Aerobic Endurance in Competitive Athletes. Applied Sciences, 14(19), 8976.

Duhe, E. D. P., Haryanto, A. I., Horman, J., & Punu, D. (2024). Analisis Biomotorik Atlet Tinju: Optimalisasi Kemampuan Kekuatan Fisik. Jurnal Pendidikan Olahraga, 14(3), 120–126.

Hartono, R., Putranto, D., & Saputra, A. (2024). Kajian Literatur Perbandingan Hasil Shooting Penalty Kaki Bagian dalam dan Punggung Kaki dalam Permainan Futsal. Riyadhoh: Jurnal Pendidikan Olahraga, 7(2).

Ilyas, M. Bin, Aksir, M. I., & others. (2024). Peningkatan Keterampilan Menggiring Bola Melalui Metode Latihan Kelincahan Pada Siswa Pelajar Kabupaten Gowa. Journal Physical Health Recreation (JPHR), 5(1), 89–94.

Irvan, I., & Asyhari, H. (n.d.). Study Of Correlation Of Nutritional Status With The Cardiovascular Resistance Of Basket Players. Proceeding of The International Conference on Science and Advanced Technology (ICSAT), 1469–1479.

Nopriani, Y., & Riadi, E. S. (2024). PERBANDINGAN KOMPRES HANGAT JAHE MERAH (ZINGEBER OFFICINALE VARIETAS RUBRUM) DAN SERAI (CYMBOPOGON CITRATUS) TERHADAP SKALA NYERI ARTIHTIS PADA LANSIA. Jurnal Kesehatan Tambusai, 5(2), 4898–4909.

Pasaribu, A. M. N. (2020). Tes dan pengukuran olahraga. Banten: Yayasan Pendidikan Dan Sosial Indonesia Maju (YPSIM).

Sekulic, D., Pojskic, H., Zeljko, I., Pehar, M., Modric, T., Versic, S., & Novak, D. (2021). Physiological and anthropometric determinants of performance levels in professional futsal. Frontiers in Psychology, 11, 621763.

Susilawati, D. (2018). Tes dan pengukuran. UPI Sumedang Press.

Wulandari, N., & Syahrul, S. (2022). Pembuatan Minuman Herbal Yang Berkhasiat Untuk Mengatasi Masalah Pencernaan (Detoks Tubuh). Journal of Social Responsibility Projects by Higher Education Forum, 3(1), 35–39.

3946-Article Text-16076-1-4-20250531.docx

ORIGINALITY REPORT

11%	10%	6%	1%
SIMILARITY INDEX	INTERNET SOURCES	PUBLICATIONS	STUDENT PAPERS

PRIMARY SOURCES

1	doaj.org Internet Source	2%
2	jurnal.stokbinaguna.ac.id Internet Source	1%
3	www.coursehero.com Internet Source	1%
4	ejurnal.ubharajaya.ac.id Internet Source	<1%
5	ijmmu.com Internet Source	<1%
6	ejournal.unis.ac.id Internet Source	<1%
7	C. Setiawan, Muzani, Warnadi, F.M Akmal, Ermalia. "The Improvement of Community Knowledge about Tsunami Disaster in Sawarna Village, Bayah Subdistrict, Lebak Regency, Banten Province", IOP Conference Series: Earth and Environmental Science, 2020 Publication	<1%
8	Submitted to Chapman University Student Paper	<1%
9	eprints.unm.ac.id Internet Source	<1%

10	pubmed.ncbi.nlm.nih.gov Internet Source	<1%
11	scholarhub.ui.ac.id Internet Source	<1%
12	Submitted to University of New South Wales Student Paper	<1%
13	ijpsat.org Internet Source	<1%
14	Harmandeep Singh. "Is corporate reputation associated with voluntary cybersecurity risk reporting?", Meditari Accountancy Research, 2024 Publication	<1%
15	Lina Kurniawati, Nonoh Siti Aminah, Ahmad Marzuki. "Conceptual understanding and consistency level of high school students in optics", AIP Publishing, 2018 Publication	<1%
16	Ulfa Khairunnisa, Helmi Yazid, Iis Ismawati. "The Influence of Internal Audit, Capital Structure, Independent Board of Commissioners and Institutional Ownership on the Financial Performance of Banking Sector Companies Listed on the IDX for the 2018-2020 Period", Journal of Applied Business, Taxation and Economics Research, 2022 Publication	<1%
17	ejournal.undiksha.ac.id Internet Source	<1%
	ejournal.unmus.ac.id	

18	Internet Source	<1 %
19	journal.unucirebon.ac.id Internet Source	<1 %
20	www.ncbi.nlm.nih.gov Internet Source	<1 %
21	A. Bukhari, S. As'ad, N.A. Taslim, M. Thaiyeb, I.Y. Chrissander, F.A. Pramudyo. "Dextrose 10% drink is superior to sodium-dextrose drink in increasing blood glucose and sprint speed in soccer players: A double-blinded randomized crossover trial study", Science & Sports, 2021 Publication	<1 %
22	repository.uinsu.ac.id Internet Source	<1 %
23	tmfv.com.ua Internet Source	<1 %
24	www-emerald-com-443.webvpn.sxu.edu.cn Internet Source	<1 %
25	www.researchgate.net Internet Source	<1 %
26	ejournal.unikama.ac.id Internet Source	<1 %
27	repositorio.ucam.edu Internet Source	<1 %
28	repository.unair.ac.id Internet Source	<1 %
29	rua.ua.es Internet Source	<1 %

30	www.allcommercejournal.com Internet Source	<1 %
31	www.mdpi.com Internet Source	<1 %
32	www.un-pub.eu Internet Source	<1 %
33	ummaspul.e-journal.id Internet Source	<1 %

Exclude quotes	On	Exclude matches	Off
Exclude bibliography	On		