

LITERATURE STUDY OF THE INFLUENCE OF LOW IMPACT AEROBIC GYSMS AGAINST MENOPAUSE

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ABSTRACT

Background: The end of menstrual periods (menopause) is often accompanied by a number of symptoms, such as hot flashes, night sweats, insomnia, depression, memory problems and impaired quality of life. Physical exercise with aerobic exercise duration of 30 minutes for 3 or 4 times will have a positive effect on quality of life. All movements in tera gymnastics have the advantage of reducing anxiety, reducing depression and improving sleep quality. **Objective:** The purpose of this literature review study is to find out specifically the effect of Low Impact Aerobics on the menopausal women. **Method:** This type of research is the study of literature. Researchers conducted a journal search through the National Library of the Republic of Indonesia, Ebsco and Google Scholar using keywords the effect of low impact aerobics on menopausal women. The literature used is published literature from 2012 to 2022. **Results:** The results of the analysis of this literature study show that the Seniorita Gymnastics (Low Impact Aerobics and Tera Gymnastics) the highest respondent characteristics in this study were the number of children <4 as much as 82.1%. Married majority of married status is 78.6%. The level of education in both groups was more low-educated at 57.1%. For employment status, more did not work at 62.5%. Quality of life has changed the most from the physical domain followed by the psychological domain to the social and environmental domain. **Conclusion:** There are Effects of Low Impact Aerobics on Menopausal Women.

Keywords: menopause, low impact, aerobics

Latar Belakang : Berakhirnya periode menstruasi (menopause) sering kali disertai sejumlah gejala, seperti *hot flashes*, berkeringat malam, *insomnia*, depresi, gangguan daya ingat dan gangguan kualitas hidup. Latihan fisik dengan senam aerobik durasi 30 menit selama 3 atau 4 kali akan memberikan efek positif terhadap kualitas hidup. Seluruh gerakan pada senam tera memiliki keunggulan dapat menurunkan kecemasan, menurunkan tingkat depresi serta dapat meningkatkan kualitas tidur. **Tujuan :** Tujuan dari studi literatur ini adalah ingin mengetahui secara spesifik pengaruh Senam Aerobik Low Impact terhadap menopause. **Metode :** Jenis penelitian ini adalah studi literatur. Peneliti melakukan pencarian jurnal melalui Perpustakaan Nasional Republik Indonesia, Ebsco dan Google Scholar dengan menggunakan kata kunci pengaruh senam aerobik low impact terhadap menopause. Literature yang digunakan adalah literature yang terpublikasi dari tahun 2012 hingga tahun 2022. **Hasil :** Hasil analisis studi literatur ini menunjukkan bahwa Senam Aerobik Low Impact karakteristik responden yang paling tinggi dalam penelitian ini adalah jumlah anak <4 sebanyak 82,1%. Status pernikahan mayoritas yang menikah yaitu 78,6%. Tingkat pendidikan pada kedua kelompok lebih banyak berpendidikan rendah yaitu sebanyak 57,1%. Untuk status pekerjaan, lebih banyak yang tidak bekerja yaitu 62,5%. Kualitas hidup yang paling banyak berubah yaitu dari domain fisik diikuti oleh domain psikologi lalu domain sosial dan lingkungan. **Kesimpulan :** Terdapat Pengaruh Senam Aerobik Low Impact Terhadap Menopause.

Kata Kunci : menopause, aerobik *low impact*, senam.

PRELIMINARY

According to *World Health Organization* carry on age (elderly) is group population aged 60 years or more . Globally in 2013 the proportion from population population aged more from 60 years old is 11.7% of the total world population and is estimated amount the will Keep going increase along with enhancement age hope live . Amount proportion The elderly in Indonesia are also increasing every year . WHO data in 2009 showed elderly amounted to 7.49% of the total population , in 2011 it became 7.69% and in 2013 it was obtained proportion elderly by 8.1% of the total population (WHO, 2015) .

Results of research conducted by Nurlina (2018) about Influence Gymnastics Aerobics Low Impact To Enhancement Quality Life Woman Menopause obtained that quality life group woman menopause routine exercise aerobics low impact more better than _ group woman menopause that doesn't To do gymnastics . one _ activity physical that can conducted is gymnastics aerobics . Exercise physique with gymnastics aerobics 30 minutes duration for 3 or 4 times will give effect positive to quality life (Martin, et al., 2009) . The movements performed in gymnastics aerobics could in the form of intense movement _ light (low impact) . According to Leuto et al. (2012) gymnastics aerobics could increase production hypothalamus -endorphins that can _ stabilize temperature so that could lower frequency of hot flushes and can increase quality live .

The advantages of gymnastics aerobics low impact that is whole movement on gymnastics aerobics low impact could lower anxiety (anxiety) , stress and reduce level depression (Sukartini & Nursalam, 2009) . Moment

To do gymnastics aerobics low impact will happen process where *HPA axis* stimulate glands pineal for secrete *serotonin and melatonin* , after which the stimulation from the *hypothalamus* will be continued on *pituitary anterior* for shape *endorphins* and *enkephalins* (Triyanto, 2014) . Because appearance *endorphins* _ on moment sport , it will arise the effect of feeling happy , happy , can sleep more soundly , and mind stay fresh (Widiani & Proverawati, 2010; Aisyah, 2017) .

Measurement quality life important for woman who has entering menopause , in order to strive for action enhancement quality live . This is because of the quality life will affect continuity life the woman herself related with hope his life . If have quality good life , then will have hope good life anyway (Glasier & Gebbie, 2006) .

With Support theory , observation and study literature conducted on postmenopausal women through aerobic exercise low impact s as tools for increase quality life menopausal women then writer dig more in about the effect of Low Impact Aerobic Gymnastics on menopause.

METHOD

Incoming research design in studies literature this use quasi - experimental design and random control trial. Type method study this is method best in answer question clinical in the field . Type reviewed studies is all type research using Gymnastics Aerobic Low Impact on menopause. Specified participants for reviewed restricted . Only elderly just entered _ as observed sample in studies literature . Incoming intervention in criteria inclusion is Aerobic Gymnastics Intervention low

impact with outcome type is limited to the effect of aerobic exercise low impact on menopause, study literature this arranged through search article research that has been published . Population the sample is whole sample elderly who get treatment of elderly exercise , low impact aerobic exercise on menopause. Search conducted use National Library of the Republic of Indonesia, Ebsco and Google Scholar with keywords each variable that has selected . Found articles _ be read with careful for see is article Fulfill criteria inclusion writer for made as literature in writing *literature review* . Livelihood limited start from 2002 to _ 2022 accessible _ fulltext in pdf format as well as have method study analytics . Article published research _ with keywords _ the effect of low impact aerobic exercise on menopause will entered in *literature review* .

RESEARCH TIME

Compilation study studies literature done on the month September 2022 until month October 2022.

SEARCH METHOD

This *Literature Review* using 3 (Three) media or method search journal , that is as following :

1. National Library of the Republic of Indonesia with address site : www.pnri.go.id total journals obtained _ namely 5 journals .
2. Ebsco with address site : <http://search.ebscohost.com> total journals obtained _ namely 2 journals .
3. [Google Scholar site address https://scholar.google.co.id](https://scholar.google.co.id) total journals obtained _ ie 8 journals .

RESULTS

No.	Writer (year)	Title	Destination	The place Study	Amount Sample	Age	Method Study	Results
1	Obedient Sumedi (2010)	The Effect of Elderly Gymnastics To Decreasing Insomnia Scale in the Elderly	Knowing the influence of Elderly Gymnastics to drop insomnia scale in the elderly	In the orphanage Wredha Dewanata Cilacap	16 samples	60-74 years old	Quasi Experimental With Pretest - Posttest Without Control Group	Elderly with partial insomnia _ big be in the group 60-74 years old (elderly) as many as 13 respondents (81.25%). manifold most gender _ that is man as many as 9 respondents (56.25%). Respondent 's degree of insomnia before given gymnastics treatment , namely 9 respondents (56.25%) with mild insomnia , 5 respondents (31.25%) with moderate degree of insomnia , while the other 2 respondents (12.5%) was on the level of severe insomnia . Respondent 's degree of insomnia after given gymnastics treatment , namely 11 respondents (68.75%) did not experience insomnia disorder , 3 respondents (18.75%) with the degree of mild insomnia , while 2 (12.5%) were in the degree of moderate insomnia . Occur drop degree of insomnia after given exercise treatment on 5 respondents with moderate degree of insomnia decrease into 3 respondents , 2 respondents who experienced severity of insomnia decrease Becomes moderate degree of insomnia . While 9 respondents others who experience mild insomnia degree already no experience insomnia again . _ Three respondent experience number drop good degree of insomnia from moderate degree of insomnia until respondent no experience disturbance insomnia, thing this because respondent more routine doing sport every day than scheduled _ that is walk around _ nursing home . There is a meaningful influence in fitness elderly to drop insomnia scale in nursing home Wredha Dewanata Cilacap with <i>p - value</i> : 0.0001.
2	Ita Eko Suparni (2014)	Connection Menopausal Disorders With Anxiety Levels In Menopausal	Knowing connection menopausal disorders with level worry in menopausal women	In the Village Dawuhan Subdistrict Purwoasri Kediri Regency	84 samples	45-55 years old	Research Design Analytic Correlational Studies	Analysis result with Chi Square method manual calculation X^2 count > X^2 table which is $13.75 > 7.815$ so that H1 is proven which means connection menopausal disorders with level anxiety in menopausal mothers in the village Dawuhan , District Purwoasri Kediri Regency . In coefficient manual calculation contingency obtained value 0.375 then connection Among both variables are low . Existence change physique menopausal women cause anxiety in postmenopausal women , but there is other factors such as attitude , style life , cultural factors and psychological and social

		e Mothers						<p>status economy , which affects worry menopausal women .</p> <p>Influential factors _ by significant to level Anxiety in menopausal women is knowledge , attitude , support family , condition economy and style live . However , the socio - cultural characteristics that include age , level education and work no show significant influence . _</p> <p>Conclusion from study this is the more good influencing factors _ by significant the so the more low level anxiety experienced . _ Menopausal women should recommended for fill in time free with involved active in activity like Integrated Healthcare Center elderly so that could To do swap information with fellow woman as well as look for information by large about things to face through various counseling carried out by staff health . Whereas for family recommended for give attention to menopausal women , equip self with enough information _ about menopause, do consultation with member family closest friend _ even doctor for get correct information and go through menopause with style healthy and mindful life _ positive to get avoid worry that alone .</p>
2	Ruri Yuni Astari (2014)	The Relationship Between Menopausal Syndrome And Quality Menopausal Women's Life	Knowing connection Among menopausal syndrome with quality life menopausal women	At the Health Center Sukahaji District Majalengka	65 samples	45-65 years old	Method Study Done By Observation Analytic With design Cut Latitude For 1-2 Years	<p>Research results show existence connection negative strong Among menopausal syndrome aspect physiological and psychological with quality life ($r = -0.786$ $p = 0.000$ and $r = -0.706$ $p = 0.000$), relationship negative strong by simultaneous menopausal syndrome aspect physiological and psychological with quality life female ($r = -0.772$, $p = 0.000$), relationship mean Among income and education with quality alive ($r = -0.313$ $p = 0.011$ and $r = -0.359$ $p = 0.003$). parity no relate mean with quality life menopausal women .</p> <p>There is connection Among menopausal syndrome from aspect physiology and aspects psychological with quality live . Complaint physiology that is felt the most is no capable concentrate , forgetfulness and confusion , distraction digestion , stomach bloating , nausea and frequent throw away wind , drop in energy mental physical , sweat a lot and experience fatigue . Complaint psychologically felt the most _ is easy angry , restless and not patience , improvement allergies and changes body odor , feel tired , lethargic or tired and experiencing dizzy , head heavy as well as lost balance .</p>

								By whole quality life menopausal women in the Puskesmas area Sukahaji on average stated normal __ just in operate his life especially health and feel satisfied with environment as well as connection social . For menopausal women in the Puskesmas area Sukahaji Regency Majalengka less income and level _ low education _ related with drop quality life so that will influence factor physical , psychological and social .
3	Yulia Handayani (2014)	Relationship Between Activities Physique With Complaint Rate Climacterium in women aged 45-65 years	Knowing connection Among activity physique with level complaint climacteric in women 45-65 years old	In the Village Tilingsing	37 samples (purposive sampling)	45-65 years old	descriptive Correlation	<p>Based on Correlative test <i>pearson</i> concluded have value coefficient correlation -0.67 (p value = 0.810) The figure show that second variable have very correlation _ weak because below 0.5. The negative sign (-) indicates opposite relationship _ in other words increase activity physique no followed with level complaint climacterium . Coefficient determination (r^2) is 0.004. This thing show that activity physique take effect to level complaint climacterium by 0.4% and the rest influenced by factors another . Connection activity physique with level complaint climacterium analyzed with statistical test <i>biserial correlation point</i> , where score activity physique as X- axis and level complaint climacterium as the Y axis . From the result data processing obtained coefficient correlation (r) is -0.67 and p value = 0.810. The figure show that second variable have enough correlation _ because below 0.5. The negative sign (-) indicates opposite relationship _ in other words increase activity physique no followed with complaint climacterium . Coefficient determination (r^2) is 0.004. This thing show that activity physique take effect to level complaint climacterium by 0.4% and the rest influenced by factors another . This thing show that level complaint climacterium no influenced by activity physical .</p> <p>Other influencing factors with readiness somebody dealing with menopause condition social economy . Condition social economy somebody by no direct will affect the readiness facing menopause. state good economy _ allow woman more easy get facilities and amenities support , such as magazines , newspapers , books health , and so on for get information and knowledge about menopause.Besides that , condition health someone can too influence condition psychological , for example in patients disease chronic.Condition the could influence</p>

								readiness a woman approaching menopause, because there there is a transition period or changes . Research results Correlation activity physique with level complaint climacterium results connection enough , where activity physique have connection with level complaint climacterium by 0.4%.
4	Oktevan a Tulung (2014)	Connection Premenopausal Mother's Attitude With Changes That Happened Towards Menopause	Knowing connection attitude mother premenopause with the changes that occur before menopause	In Woloan 1 Village , District West Tomohon , Tomohon City	43 samples	41-48 years old	Use Method <i>Cross Sectional</i>	<p>Research results use Chi-Square statistical test analysis with level the significance of = 0.05 or 95%. Statistical test results obtained value of = $0.049 < = 0.05$. Conclusion is there is connection attitude mother premenopause with change before menopause in the village Woloan 1, District West Tomohon , Tomohon City . Expected government ward Woloan 1 get increase cooperation with officer health for To do counseling and counseling to mother premenopause about importance changes that will occur before menopause.</p> <p>Conclusion: attitude mother premenopause by common in the village Woloan 1, District West Tomohon , Tomohon City that is behave positive , changes that occur before menopause in the village Woloan 1, District West Tomohon , Tomohon City that is dominant moms premenopause knowing changes that will occur before menopause, there are connection attitude mother premenopause with the changes that occur before menopause in the village Woloan 1, District West Tomohon , Tomohon City .</p>
5	Ida Sriwaty (2015)	Influence Menopause Psychoeducation and Relaxation For Lower Pre Menopausal Women's Anxiety	Knowing influence menopausal psychoeducation and relaxation for lower worry premenopausal women	In the Village in the Yogyakarta Region	33 samples	>40 years old	Randomized Control Group Pre-Test Post-Test Design	<p>Based on results analysis with the <i>Wilcoxon</i> test , in the group experiment show Z value = -2.207 with p value = 0.027 ($p < 0.05$), meaning could concluded that intervention psychoeducation <i>menopause</i> and relaxation give significant influence _ to drop anxiety in women <i>premenopause</i> , while in the group control show Z value = 1.633 with p value = 0.102 ($p > 0.05$). This thing show that subject in group control no experience drop score scale anxiety .</p> <p>Based on <i>Mann Whitney</i> test results group experimental and control groups obtained results value of $Z = -2.303$ and $p = 0.021$ ($p < 0.05$), p the show that there is difference score scale group anxiety _ experiment and group control . Giving psychoeducation and relaxation take effect to drop level worry woman <i>premenopause</i> in group experiment</p>

								<p>Results show that group experiment obtained significant results _ with the value of $p=0.027$ ($p<0.05$) and the Z -value of -2.207 while in the group control showing results that are not significant with p value = 0.102 ($p> 0.05$) and a Z value of -1.633. On the <i>Mann Whitney</i> test show score significant 0.021 and Z value of -2.303. Conclusion gift menopausal psychoeducation and relaxation could lower anxiety in premenopausal women .</p> <p>Based on results research and discussion above , then _ could concluded that psychoeducation <i>menopause</i> and relaxation give effective influence _ to drop worry woman <i>perimenopause</i>. Influencing factors _ drop her anxiety is liveliness during the therapy process like active in practice relaxation , enthusiasm in follow given material . _ During gift therapy is also a participant experience the changes that occur in herself moment face perimenopause so that can do action preventive for reduce anxiety experienced _ subject , so should participant training for can Keep going practice relaxation that has been done by independent , as well as read book psychoeducation that has been given so that information about menopause no forgotten .</p>
6	Erna Silvia Budi Anggarwati (2016)	Enhancement Quality Sleep Elderly Woman Through routine Doing Elderly Gymnastics	Knowing enhancement quality sleep elderly woman through routine doing gymnastics for the elderly	In the Village Area Depok Jaya	98 samples	60-79 years old	Comparative Analytics With Approach <i>Cross Sectional</i>	<p>Research results show there is difference elderly PSQI score regular woman _ follow gymnastics with those who don't of 2.11 ($p<0.001$). Study this recommend to practitioner health for To do advocacy to posbindu that hasn't yet apply activity gymnastics for the elderly in their area and encourage the elderly for take part in elderly gymnastics by routine .</p> <p>Study this researching existence connection Among routine follow elderly gymnastics and quality sleep elderly woman . Based on results research , found that there is connection Among routine follow the elderly and quality gymnastics sleep elderly woman . Elderly exercise _ _ by routine could increase quality sleep elderly . So, routine following gymnastics is factor important thing to do pay attention to get optimal benefits in increase quality sleep elderly . because of that , researcher recommend to practitioner health for To do advocacy to posbindu-posbindu that haven't been apply elderly gymnastics activities in their area and encourage the elderly for take part in elderly gymnastics by</p>

								routine (ER, TN, PN).
7	Ni Nyoman Sasnitari (2016)	Effects of Aerobic Gymnastics <i>Low Impact</i> To Subtraction Complaints of Premenopausal Mother	Knowing the effect of aerobic exercise <i>low impact</i> to subtraction complaint mother premenopause	In the area of the Merdeka Health Center , Bogor	23 samples (<i>systematic random sampling</i>)	41-48 years old	Pre-Experiment al Design , Namely One Group Pretest Post-Test	<ol style="list-style-type: none"> 1. Aerobics <i>low impact</i> effect to subtraction complaint vasomotor , complaints psychological and complaints somatic in premenopause 2. Before do aerobics _ Complaint vasomotor the most experienced by a respondents 4 complaints after do aerobics _ complaint the most experienced by respondents 2 complaints . 3. Complaints psychic the most experienced by a respondent before exercise 3 complaints after do aerobics _ complaint the most experienced by respondents be 1 complaint . 4. Complaints vasomotor the most experienced by a respondent complaint after do aerobics _ complaints experienced by respondents _ still 1 complaint . <p>Analysis result score significance 0.00 ($p < 0.05$) for complaint vasomotor , psychological and 0.03 ($p < 0.05$) for complaint somatic . concluded there is meaningful influence _ before exercise and after follow aerobic exercise. Need May the <i>low impact</i> aerobic exercise program be implemented by routine for pre-menopausal mothers in effort prevent and reduce complaint premenopause .</p>
8	Nurlina (2017)	The Effect of Low Impact Aerobics on Quality Menopausal Women's Life	Knowing the effect of low impact aerobic exercise on quality life menopausal women	In the hamlet Additional Work Area Public health center Gamping II	56 samples (purposive sampling)	45-55 years old	Quasy Experiment With Pretest And Posttest Non Equivalent Control Group Design	<p>In group intervention quality average life before do aerobics _ <i>low impact</i> is 60.99 and after do gymnastics aerobics <i>low impact</i> average increase to 71.72. Seen difference score <i>mean</i> between before and after exercise is 10.72 with standard deviation 9.42. Statistical test results obtained score <i>p value</i> < 0.05 then could concluded that there is significant difference _ Among quality life before and after do aerobics _ <i>low impact</i> .</p> <p>In group average quality control life before do aerobics _ <i>low impact</i> is 70.36 and after do aerobics _ <i>low impact</i> average increase to 72.42. Seen difference score <i>mean</i> Among before and after exercise is 2.06 with standard deviation 11.26. Statistical test results obtained score <i>p value</i> 0.341 which means that no there is significant difference _ Among quality life before and after To do aerobic exercise low impact</p>

								<p>Statistic test results score <i>pvalue</i> < 0.05 i.e of 0.003. This result explain that there is significant difference between the two group research . Average score <i>mean</i> on group doing aerobics _ <i>low impact</i> of 10.72 and in the group that did not do aerobics <i>low impact</i> of 2.06. So can concluded that the average difference <i>mean</i> Among second group the as big as 8.66.</p> <p>Research results showing that there is enhancement quality life in menopausal women before and after doing low impact aerobic exercise in the group intervention of 10.72 (p value = 0.000) and in the control group of 10.72 (p value = 0.341).</p>
9	Lina Siti Nuryawati (2017)	Determinant Quality Living in a Woman Who Has Entering Menopause	Knowing determinant quality live on a woman who has enter menopause	At UPTD Puskesmas Argapura Regency Majalengka	80 samples	45-65 years old	Use Method <i>Cross Sectional</i>	<p>Research results is known that determinant quality live on a woman who has entering menopause with an average total quality live (70.6), less from half symptom physique category weight (46.3%) , half disturbance psychological category rice (50.0%), less from half level education low (48.8 %), less from half income low (46.3%),. there is connection symptom physical (p 0.000), disturbance psychology (p 0.000), and level education (p 0.001) , income (p 0.003) weak soup during menopause at UPTD puskesmas Argapura districts Majalengka year 2017.</p> <p>Conclusion from study the</p> <ol style="list-style-type: none"> 1. Determinant quality live on a woman who has entering menopause at diUPTD Argapura districts Majalengka 2017 with average total quality life of 70.6 including category enough 2. Less than half symptom physique girl who has entering menopause at the UPTD Puskesmas Argapura districts Majalengka incoming 2017 _ category heavy 3. half disturbance psychology in women who have had entering menopause at UPTD Argapura Regency Majalengka 2017 includes _ category heavy 4. Less than half level education for women who have entering menopause at the UPTD Puskesmas Argapura districts Majalengka year 2017 at the level of education low 5. Less than half income for women who have entering menopause at the UPTD Puskesmas Argapura districts Majalengka 2017 belongs to with income low 6. Connection symptom physique with quality live on a woman who has

								<p>entering menopause at UPTD Argapura Regency year year 2017</p> <p>7. Connection disturbance psychological with quality live on a woman who has entering menopause at the UPTD Puskesmas Argapura districts Majalengka year 2017</p> <p>8. There is a relationship level education with quality live on a woman who has entering menopause at the UPTD Puskesmas Argapura districts Majalengka year 2017</p> <p>9. There is a relationship income with quality live on a woman who has entering menopause at the UPTD Puskesmas Argapura districts Majalengka year 2017</p>
10	Luh Ari Arini (2018)	Quality Routine Menopause Life Doing Physical Exercise Orhiba : Study Measurement Use WHOQOL -BREF . Questionnaire	Knowing Quality Routine Menopause Life _ Doing Physical Exercise Orhiba : Study Measurement Use WHOQOL -BREF . Questionnaire	At Singaraja Bali City Park	100 samples (<i>purposive sample</i>)	45-59 years old	Analytic Observation With Cross-Sectional Design	<p>From result data analysis using <i>sample t test</i> ($\alpha = 0.05\%$) obtained significant results ($p = 0.000$) between the group that did practice physique orhiba with those who don't , and between routine ones To do practice physique orhiba with frequency 5 times/ week have more results _ good if compared with frequency of 2-3 times / week and 1-2 times / week . Based on Thing the so that the need for exercising (orhiba) regularly routine especially in postmenopausal women , because the more frequently and regularly conducted so The results obtained will also the more good related to quality life menopausal women .</p> <p>In respondents who do not once To do practice physique with routine _ To do practice physique result also different , found in the quality domain life such as physical , psychological, social and environmental domains as well as health by general . In group control say sick experienced physical _ often hinder it for active , often need therapy medical related condition physical and less satisfied to ability they for work compared with regular respondent _ To do practice physical , group control also says sleep at night often disturbed and sometimes no can sleep . state the already certain will influence health body by thorough and finally impact on the decline quality life when enter age old , more again menopausal women should face influence drop hormone that happens in her body or feel menopausal syndrome . Regular respondents _ To do practice physique with frequency 5 times a week have more results _ good compared group control earlier , indicated that the more often To do orhiba so quality life menopausal women will the more good as well as in the situation psychological and social . In the psychological domain regular</p>

								<p>menopausal women To do practice physique orhiba say more capable concentrate and receive change appearance her body as well as seldom very have negative feelings _ if compared with group control . From the social domain , differences were also found Among respondents who do not once practice physique orhiba with routine _ To do practice physique orhiba . This thing caused because practice physique with orhiba usually held by group so that interaction social in association will built in activity this . Group orhiba confess seldom experience problem in his health nor experience related complaints _ with menopause , different if compared with control group .</p> <p>Based on results research and discussion before , then could taken conclusion that quality life by subjective tend more good for postmenopausal women who do practice physique orhiba by routine compared with those who don't To do practice physique orhiba . The more frequently and regularly To do practice physique orhiba so quality his life will the more fine , fine seen from in terms of physical , psychological , social and environmental domains in quality life nor in health by general . because of that mandatory menopausal women by routine To do practice physique especially with orhiba because movement in orhiba have very way _ simple however have very benefit _ big if conducted with correct and orderly .</p>
1 1	Winda Astuti Hulu (2018)	Gymnastics Relationship With Quality Life Early Elderly	Knowing gymnastics relationship with quality life elderly beginning	At the Medan Tuntungan Health Center	34 samples	45-59 years old	Method <i>Cross Sectional</i>	<p>Based on results research and discussion previously can be taken Conclusions :</p> <p>1) Gymnastics performed on average have characteristics of work status that are not work but have income , marital status married and not have disease chronic .</p> <p>2) Quality life by physical and psychological in the elderly who follow 70.6% gymnastics with categorical good and 29.4% with categorical enough . Whereas for the categorical bad no there is .</p> <p>3) Quality life by physicists who follow gymnastics with categorical good and exercise routine as much as 70.8% while quality life by physique with categorical enough and exercise routine is only 20%. and results chi square test shows Among score physical and gymnastic status</p>

								<p>have correlation or relationship .</p> <p>4) Quality life by psychological categorical good and exercise routine as much as 62.5% while quality life by psychological with categorical enough and exercise routine is only 40%. and results chi square test shows Among score psychological and exercise status is not have correlation or relationship .</p> <p>From the results of the <i>chi square</i> test shows exercise with _ quality life by physique from 100% who follow categorical gymnastics good and exercise routine as much as 70.8 % and categorized enough and only 20% exercise routine with $P < 0.05$ means Among score physical and gymnastic status have correlation or relationship , while for quality life by psychological categorical good and routine exercise 62.5% and categorical enough and exercise routine is only 40% with $P > 0.05$ means Among score psychological and exercise status is not have correlation or relationship .</p> <p>Gymnastics performed on average has characteristics of employment status that are not work but have income , marital status married and not have disease chronic and quality life by physical and psychological in the elderly who take part in gymnastics tend to with categorical good .</p>
12	Hendro Wardoyo (2018)	Comparison Effect Aerobic Gymnastics Work Low Impact And Walk For 45 Minutes To Decrease in LDL (Low Density	Knowing comparison effect aerobic exercise _ low impact and walk for 45 minutes to drop rate ldl (low density lipoprotein) in members pstw buddhi dharma	In Bekasi, West Java	14 samples	61-85 years old	Method Experiment That is With Pre-Test And Post- Test Two Group	<p>Based on results research contained in chapter IV , then could concluded that drop LDL levels of PSTW Budhi Dharma Bekasi West Java members who follow activity aerobic exercise _ low impact and walk for 45 minutes is as following :</p> <ol style="list-style-type: none"> 1) Average drop LDL levels of PSTW Budhi Dharma Bekasi members who follow activity gymnastics work _ aerobics low impact for 45 minutes of 10.21 mg/dl with t - value is 9.54 and t- table is 2.160 with level significant = 0.05. With Thus t- count > t- table so hypothesis zero (H0) is rejected , hypothesis work (H1) is accepted . With thereby effect aerobic exercise _ low impact for 45 minutes take effect lower LDL levels in members of PSTW Budhi Dharma Bekasi. 2) Average drop LDL levels of PSTW Budhi Dharma Bekasi members who follow activity walk for 45 minutes _ amounted to 4.78 mg/dl with value of t count is 11.77 and the t - table value is 2.160 with level significant 0.05. With so t- count > ttable so hypothesis zero (H0)

		<i>Lipoprotein</i>) Levels in Members Pstw Buddha Dharma						is rejected , hypothesis work (H1) is accepted . With thereby effect work walk for 45 minutes _ take effect lower LDL levels in members of PSTW Budhi Dharma Bekasi. 3) Aerobic Gymnastics Activities More <i>Low Impact</i> many lower LDL levels as much as 5.43 mg/dl compared to with activity walk with _ t - value is 4.740 and the t - table value is 1.706 with level significant = 0.05. With Thus t- count > t- table then (H0) is rejected and (H1) is accepted .
13	Hartini (2018)	The Effect of Aerobic Gymnastics Exercise <i>Low Impact</i> Against Decrease Body Fat Percentage In Support Quality Life Elderly Rural Communities	Knowing influence aerobic exercise _ <i>low impact</i> on drop body fat percentage in support quality life elderly Public rural	In District Weru Sukoharjo Regency	40 samples	45-65 years old	Experiment With design Research “Pretest- Posttest With Control Design”	Based on results testing difference test beginning with analysis t-test statistics between group 1 and group 2 obtained score of 0.09 and ttable with N = 20, db = 20 – 1 = 19 on level 5% significance of 1.72. This thing show tcount < ttable . With thereby could concluded , H0 is accepted . This thing means , between group 1 and group 2 before given treatment no there is significant difference at first . _ Based on results calculation percentage body fat loss is known that group 1 has percentage body fat loss by 10.6 % . Whereas group 2 has percentage body fat loss by 3.4 % With thereby could concluded , group 1 has percentage more body fat loss _ big than _ group 2. BBased on results testing difference test start and test end in group 2 obtained score of = 8.08, while ttable = 1.72. It turns out tcount > ttable , which means hypothesis zero rejected . With thereby could concluded there is significant difference _ Among results test start and test end in group 2. This that is , group 2 has percentage decrease in body fat caused by the treatment given , namely the exercise program instructor .
14	Maria Theresia Bong (2019)	Connection Mother's Knowledge About <i>Menopause</i> With Stress Levels	Knowing connection knowledge mother about <i>menopause</i> with stress level	In the Village Hoelea District Omesuri Regency Lembata East Nusa Tenggara	42 samples (<i>purposive sampling</i>)	>40 years old	Analytical Design Correlation al (<i>Corlation al Study</i>)	Analysis result correlation <i>pearson product moment</i> relationship Among knowledge level mother about menopause with level stress in the village Hoelea Subdistrict Omesuri Regency Lembata Province of East Nusa Tenggara in Table 4, it is obtained score Significant (Sig.) = 0.025 (<i>p value</i> 0.05) which means that the data is stated significant and H1 is accepted , it means there is connection Among level knowledge mother about menopause with level stress in the village Hoelea Subdistrict Omesuri Regency Lembata East Nusa Tenggara Province .

				Province			<p>Tabulated results cross between level variables knowledge mother about menopause with level stress , in Table 3, is known that part big level knowledge mother about menopause categorized enough that is as many as 26 people (61.9%), there were half categorized respondents _ have level stress currently that is as many as 21 people (50%). There are also 3 respondents who are categorized as have knowledge enough however obtained stress heavy .</p> <p>Analysis result <i>pearson product meme</i> also found score correlation coefficient (<i>pearson correlation</i>) -0.411 which means that the more good knowledge possessed _ mother about menopause, then will low level stress . <i>Pearson correlation</i> value also shows that contribution connection Among level knowledge mother about menopause with level stress in the village Hoelea Subdistrict Omesuri Regency Lembata East Nusa Tenggara Province is 41.1 % and the rest (100%-41.1%) are of 58.9% is influenced by other variables that do not researched .</p> <p>Research results prove that level knowledge mother about menopause _ as many as 26 people (61.9%) and the stress level is almost whole respondent categorized as stress currently that is as many as 35 people (83.3%). Analysis result obtained value Sig. (significant) = 0.025 (<i>p value</i> 0.05) which means the data is stated significant and H1 is accepted , it means there is connection Among level knowledge mother about menopause with level stress in the village Hoelea Subdistrict Omesuri Regency Lembata East Nusa Tenggara Province . Expected mother could increase knowledge about menopause so can get many information about menopause.</p> <p>View from results study that level knowledge mother about menopause category enough , and level stress experienced _ is stress medium , then could said that if knowledge pretty mother _ could trigger happening moderate stress . _ Trigger happening stress where mother will feel worried consequence from menstruation stops , so _ will arise feeling anxious , where is the anxiety often associated with menopause disease certain</p>
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15	Marthen Kause (2019)	Effects of Aerobic Gymnastics <i>Low Impact</i> Against Quality Sleep	Knowing the effect of aerobic exercise <i>low impact</i> on quality sleep elderly	At Posyandu GMT Elderly Award Kupang City	36 samples	60-82 years old	<i>Quasy Experiment al With design Pre And Post Test With Control Group</i>	<p>Group intervention experience change amount subject that has quality sleep good that is as many as 16 people, while a total of 18 subject group control have quality bad sleep at the moment <i>posttest</i> . There is significant difference in components _ sleep quality sleep subjective , latency sleep , duration sleep disturbance _ sleep , and efficiency sleep ($p < 0.05$), while no there is subject who uses drugs sleep so that result Becomes no meaningful ($p > 0.05$). Test statistics using the <i>Mann-Whitney</i> test . Quality data sleep at _ <i>pretest</i> and <i>posttest</i> on group intervention and control group normally distributed using test <i>Shapiro-Wilk</i> .</p> <p>Statistic test results using paired T test with mean 8.50 seconds <i>pretest</i> and 3.39 seconds <i>posttest</i> and statistical test results use Paired T test showing difference second score the mean with $p = 0,000$ ($p < 0,05$). Statistical test results using the T test no in pairs for see difference in mean sleep quality</p> <p>Among group intervention and control and get results there is the effect of aerobic exercise <i>low impact</i> which significant to quality sleep elderly with value of $p = 0,000$ ($p < 0,05$). Analysis result gymnastics effect aerobics <i>low impact</i> to quality sleep elderly group intervention and group control with Paired T test showing score significance respectively $p = 0,000$ and $p = 1,000$. Statistic test results will mean when p value < 0.05. Results analysis the effect of aerobic exercise <i>low impact</i> to quality sleep elderly group intervention and control with see difference in mean after intervention with T test no in pairs showing score significance $p = 0,000$ ($p < 0.05$) so that could say gymnastics aerobics <i>low impact</i> have influence significant _ to quality sleep elderly .</p>
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DISCUSSION

A. Characteristics That Include Age Education Occupation and Parity

From 20 journals the could drawn conclusion that characteristics the highest respondent is amount children <4, followed by marital status the majority who are married , level education low and work status no work . Based on the theory put forward by Kristen B. Van Dole MA (2009) factors that can influence *Menopause Quality of Life (MENQOL)* include : income , parity and education . Prevalence *Hot Flushes* on women who earn low more tall than woman income height and on factor parity woman with parity 4 children or more linked with enhancement amount *Hot Flushes* .

B. Analyze Studies Literature The Effect of Low Impact Aerobics on Menopause

Determination Strict criteria on method very influence amount obtained articles . Determination retrieved articles at first only limited to articles that use method study *quasi experimenter* and RCT with range years 2017-2022. After lowering criteria in the form of method research , finally the article obtained totaling 3 articles . Analysis result corresponding review literature with study shown in the results research in articles , results study by general mention that Low Impact Aerobics is indeed proven significant capable increase quality life menopausal women (Nurlina , 2017) .

Another study conducted by Ni Nyoman Sasnitiari (2016) entitled the effect of low impact aerobic exercise on subtraction complaint mother premenopause in the area of the Merdeka Health Center , Bogor according to with hypothesis study obtained that there is meaningful influence _ before and after

low impact aerobic exercise , but in study this no there is group control that becomes comparison and sample used only 23 respondents so that need conducted more development _ continue on research this .

Research results Nurlina (2017) entitled the effect of Low Impact Aerobic Gymnastics on enhancement quality life menopausal women found that Low Impact Aerobic Gymnastics can increase production hypothalamus - endorphins and boost quality live . Physical exercise with aerobics 30 minutes duration for 3 or 4 times will give effect positive to quality live . Physical exercise regular more from 60 minutes every day will lower symptom climacterium / menopause and improve quality live in the domain of psychology and social domain . Quality live the most changed that is from the physical domain followed by psychology domain then social and environmental domains . Aerobics *low impact* is impactful activities positive to enhancement organ function also affects in increase immunity in body man after practice regular (Guimaraes and Baptista, 2011) .

Aerobics *low impact* if conducted with good , continuous with adequate intensity , can be a stimulator for body , which can increase quality condition physical , psychological and health so that quality life will too increase .

Different with study Hartini (2018) entitled influence low impact aerobic exercise on drop body fat percentage in support quality life elderly Public rural in accordance with hypothesis study that there is difference influence between training programs researchers and instructors to drop body fat percentage in support quality life elderly Public countryside . From opinion the could

interpreted with appropriate movements and carried out by people who have trained so results obtained for increase quality life far more high . According to Mangoenprasodjo (2005) sport age carry on need given with various benchmarks , including load light or medium , time relatively long and aerobics . A number of example sports that can done by the elderly that is walking , sports recreation and exercise. Consequence from accumulation of fat because pattern eat what you don't regular will cause obesity that affects narrowing vessels blood consequence pinched by fat. Presence of fat in body very important , among others , for protect to weather cold , as backup energy when use carbohydrates , as source essential fatty acids , tools transport fat soluble vitamins and as protection of internal organs . However if amount of fat in body exceed from normal circumstances will Becomes problem big . Besides body seen not enough interesting too easy attacked amount disease so that quality life will disturbed .

Another study conducted by Marten Kause (2019) entitled the effect of low impact aerobic exercise on quality sleep elderly at Posyandu GMT Elderly Award Kupang City in accordance with hypothesis study obtained that aerobic exercise *low impact* has effect relaxation with lower stress and increase *mood* so elderly will experience enhancement REM phase and elderly could asleep more sound asleep . This result in line with research by Nurdianingrum and Purwoko (2016) which shows regular elderly take part in elderly gymnastics have repair quality sleep significant subjective . Duration sleep is time spent elderly for sleep per day . Duration sleep group the average intervention increased from 4-5 hours when *pretest* to 6-7 hours at *posttest*, while group control

permanent have duration sleep 5-6 hours. This result in line with study Komsiatiningsih (2015) which shows regular elderly take part in elderly gymnastics experience enhancement duration sleep from 3.7 hours to 5.3 hours.

Efficiency sleep elderly close relation with effect relaxation from aerobics *low impact*. Aerobics *low impact* will activate track *Hypothalamic Pituitary Adrenal axis* (HPA axis) for stimulate release of -endorphins and enkephalins at a time increase Activation parasympathetic for lower rate catecholamines and norepinephrine . On research this no obtained use drug sleep at *pretest* and *posttest*. In accordance with theory consequence functional by Miller (2009) that gift something intervention could change something consequence functional negative Becomes consequence functional positive . Complaint feelings of anxiety and worry slowly lost . This thing agree with research conducted by Raden Jaka (2015) , elderly gymnastics give benefits on formation more conditions good so that regular elderly To do activity sport will always in condition comfortable feeling . comfortable conditions make individual could optimize mental processes that function and also affect the ability individual face every problems that can cause stress . exercise done by group and accompanied strains music could give feeling comfortable and safe , as well as created something fun and togetherness fellow elderly . because of that sport in Thing this is elderly exercise could give role and change level anxiety in the elderly . Another opinion by Bender (2007) , there are sport by intense could increase - endorphins . Strohl (2009) add production - endorphins at the moment sport will make individual

Becomes happy happy can more sleep rest and mind keep fresh. Besides it's on activity physical and exercise will appear mechanism Psychology and neurobiology so that could arise anti-depressive and anti-political effects that can lower level anxiety .

In study this is what becomes variable dependent is quality life menopausal women . Quality live the most changed that is from the physical domain followed by psychology domain then social and environmental domains .

Even though amount Articles Viewed influence intervention to quality life menopausal women still little , intervention Aerobic gymnastics low impact this have great opportunity for practiced in order clinical and community especially in Indonesia. Condition this supported by many advantages from this exercise . Easy Low Impact Aerobics conducted because movement intensity light in 30 minutes duration for 3 or 4 times will give effect positive to menopause . So that Low Impact Aerobics is proven capable increase quality life menopausal women .

CONCLUSION

Based on results studies literature so could drawn conclusion :

1. Of several characteristics the highest respondent in study this is amount children <4, followed by marital status the majority who are married , level education low and work status no work .
2. Analysis result *literature review* or studies literature this show that Low Impact Aerobics is proven significant capable increase quality life menopausal women .

SUGGESTION

1. Public health center
Expected study studies literature this could Becomes input for Public health center in doing management elderly gymnastics activities to be modified with add movement Low Impact Aerobics for increase quality life menopausal women .
2. Educational Institution
Expected study studies literature this could made addition theory and materials reading about influence Low Impact Aerobic Gymnastics on quality life menopausal women .
3. Researcher
As ingredient for add knowledge and insight about the influence of Low Impact Aerobics and need conducted study follow-up in menopausal samples more a lot in society for increase quality life menopausal women become more good .

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