THE INFLUENCE OF THE IMPLEMENTATION OF CLEAN AND HEALTHY LIVING BEHAVIOR (PHBS)

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Abstract – *Covid -19 is type disease that arises from Severe Acute Respiratory Syndrome Virus infectio Coronacirus 2 (SARS COV -2) is the cause public For guard distance so as not to infected. Phenomenon the emphasize For improving a Clean and Healthy Lifestyle or PHBS such as increase cleanliness self , cleanliness environment , and doing prevention disease . Study This aim For analyze the effect of eco enzyme on PHBS. Type of research This is study quantitative, tested data is primary data. The data collection method uses questionnaire taken through questionnaire throughout the people of Yogyakarta who have do eco enzyme research , with Smart PLS 3.0 assistance . Research results show that cleanliness self with behavior life clean and healthy significant, eco enzyme not influential regarding PHBS, cleanliness environment with behavior life clean and healthy significant, a cleanliness environment with behavior life clean and healthy mediated by Eco Enzym significant, preventative disease with behavior life clean and healthy significance, and prevention disease with behavior life clean and healthy mediated by Eco Enzym No significan.*

Keywords: *Eco Enzyme, Clean and Healthy Lifestyle, PHBS, SEM*

1. **INTRODUCTION**

A threatening development health throughout the world is *Coronavirus* Disease 2019 (*COVID* – 19). According to (Suprapto, 2021). *Coronavirus* Disease 2019 (*COVID*– *19*) is type disease that arises consequence Severe Acute Respiratory Syndrome Virus infection *Coronacirus* 2 (*SARS COV -2*) or what is known *Corona virus* 2 (*SARS COV– 2*). Disease This is attacking disease _ breathing and can spread at the moment somebody talking , coughing , or sneeze from affected individual _ *Coronavirus* symptoms (Karuniawati, 2020). The *COVID* – 19 pandemic has become world problems for can reduce number death with increase pattern life clean and healthy , like No go out home , guard distance , always wash hand , and guard cleanliness the environment is one of them with No do accumulation trash around _ home and can do sorting with good.

Lifestyle clean and healthy as can be one of them is determined with safeguard the environment still clean. According to Constitution of the Republic of Indonesia No. 36 of 2009 states that highest degree of public health achieved through maintenance development health , This related tightly with pattern life clean and healthy are upheld high by country. Guidelines about pattern life clean and healthy stated in the regulations minister health Republic of Indonesia No. 2269/MENKES/PER/XI/2011, among others like create supportive environment , make every activity leading to its realization healthy environment Good in a way physical and nonphysical. Healthy environment in a way physical and nonphysical no regardless from effort For conserve environment like make use of , do structuring , maintaining and developing source Power existing nature. According to Junaidi (2021) the more tall activity man so compared straight with rubbish or waste produced. Rubbish is object waste that arises from exists activity human . Activity most humans _ give rise to rubbish is House stairs . Waste House ladder succeed keep order First in place disposal rubbish (Jelita, 2022). If No handled Good then Effort to conserve environment will become hampered or not can creation pattern life clean and healthy.

Waste House the stairs produced one of them originate from activity kitchen like skin fruit or vegetables already ugly , that's later can utilized become an eco enzyme. Eco enzyme is processed fluid through fermentation from rubbish organic form fruits and vegetables (Intan, 2022) well that comes from from waste House stairs , plantations , and agriculture . Eco enzyme become the product produced from activity fermentation waste organic like , skin fruit , brown sugar , and water. Yogyakarta Regency is one of them selected area For investigate the effect of eco enzyme on pattern life clean and healthy (PHBS). Directorate Health Promotion Ministry of Health and Social Welfare , has do pattern life clean and healthy since 1996 which refers to patterns management general pattern life clean and healthy such as , assessment , planning , mobilization and implementation , monitoring and assessment (Rizal, 2018). A number of There are also villages in Yogyakarta Lots community regarding eco enzyme , start from Sleman , Bantul, and Yogyakarta alone . For Yogyakarta district needs that done study about pattern life clean

healthy and the application of eco enzymes. Current study This focuses on research quantitative Where explain influence between eco enzymes and pattern life clean and healthy Yogyakarta society . We try explain is there is connection between these two variables.

A number of study find that Eco Enzyme is a technology model management organic waste that can be done For disconnect chain rubbish (Nasihin et al., n.d; Saifuddin *et al.,* 2022). Eco enzyme was first developed by Dr.Rosukon Poompanvong, a founder of the Thai Organic Farming Association who has research since 1980s . Eco-enzyme introduced more widely by Dr. Joean Oon, one researcher Naturopathy from Penang, Malaysia.

Activity Clean and Healthy Living Behavior (PHBS) is a series of empowerment processes public For maintain and improve his health . The PHBS program has a number of index assessment is a must fulfilled by everyone public that is stages assessment , planning , movement and implementation , monitoring , and assessment (Y. Rizal, 2018). Researchers use theoretical models Health Belief Model (HBM) and Procede theory preeceed.

Based on the Health Believe Model (HBM) theory explains that somebody will do various type action related prevention with health If they feel that they can avoid condition poor health (Crosby, 2011) which has an impact on the implementation of PHBS. Health Believe Model (HBM) Theory explain someone more good do action preventive before face to face with related adverse conditions with future health will impact on PHBS (Crosby, 2011) and public should do action prevention before caught disease.

H 1 : Cleanliness self influential positive to implementation of PHBS in the community in Yogyakarta

H 2 : Cleanliness environment influential positive to implementation of PHBS in the community in Yogyakarta

H 3 : Prevention disease influential positive to implementation of PHBS in the community in Yogyakarta

Connection cleanliness self towards PHBS giving influence positive . Cleanliness self can improved with the presence of eco enzyme, where rubbish organic produce can utilized become more products. Cleanliness environment can improved with the presence of eco enzymes. Eco enzyme can utilise rubbish organic become more products useful. Connection prevention disease towards PHBS giving influence positive . Prevention disease can improved with the presence of eco enzyme, through utilization rubbish organic can reduce stack rubbish so that can increase prevention disease.

H 4: Making eco enzyme as a moderating variable , cleanliness self influential towards PHBS

H 5: Making eco enzyme as a moderating variable , cleanliness environment influential towards PHBS

H 6: Making eco enzyme as a moderating and preventive variable disease influential towards PHBS
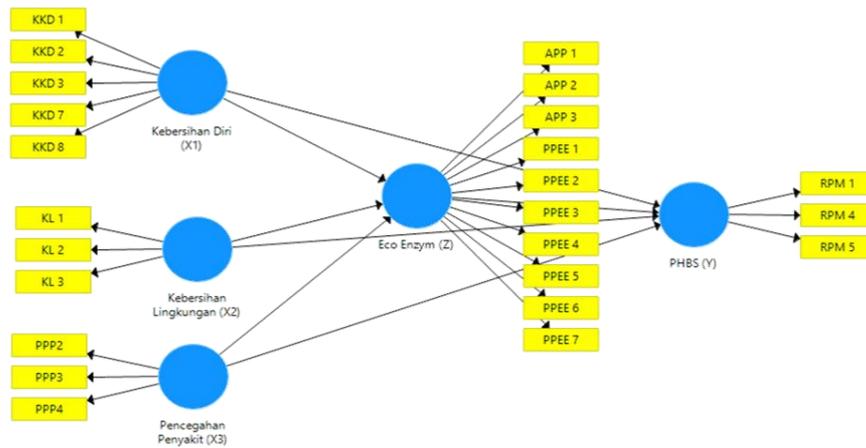
Figure 1. Framework Think Study

2. METHOD

Methodology used that is method study quantitative used for know influence of independent variables namely eco enzyme on the dependent variable that is behavior public about pattern life clean and healthy (PHBS). Data will processed use analysis multiple linear regression use tool Structural Equation Modeling (SEM) analysis with using the SmartPLS partial least squares (PLS) program version 3.0. Collected data in the form of primary data. Primary data in study This that is questionnaire with use scale likert 5 points with details 1 very No agree , 2 no agree , 3 neutral , 4 agree , and 5 strongly agree regarding eco enzymes and patterns life clean and healthy in society covers student , mother House stairs , head family who have follow eco enzyme training .

A. Tools and materials

Data will processed use analysis multiple linear regression use tool Structural Equation Modeling (SEM) analysis with using the SmartPLS partial least squares (PLS) program version 3.0.

B. Work procedures

Based on primary data obtained from results questionnaire about the influence of eco enzymes and behavior life clean and healthy , data analyzed use method analysis simple linear regression . As for form equality multiple linear regression This is as following :

Y = α + β 1 X1+ β 2 X2+ β 3 X3+ e

Information

Y = Measurement Result Against BOD or COD

α = Constant

β = Coefficient regression

X1 = Cleanliness self

X2 = Cleanliness environment

X3 = Prevention Disease

Y = PHBS
Z = Eco Enzyme
E = Error

Measurement model using outer and inner models. The outer model includes validity testing convergent , validity test discriminant , and reliability testing , while the inner model includes.

3. RESULTS AND DISCUSSION

Profile Demographics

Total sample from study this is 40 people with spectrum demographics form type gender , age and gender job . Majority respondents from our research is own type sex female (78%), average age 21-24 years (45%), when this still become students (60%), and the average is already once do practice manufacture of eco enzyme (86%).

Table 1. Demographics Respondent

Variable	Description	N	%
Gender	Man	9	22%
	Woman	31	78%
Age	≤ 20 years	6	15%
	21 - 24 yrs	18	45%
	≥ 25 years	16	40%
Work	Student	24	60%
	Self-employed	3	7%
	Housewife	13	33%
Already Once Making Eco Enzyme	Yes	43	86%
	No	7	14%

Measurement Model Test Results

a. Validity Test

Validity Test problematic extent of the instrument measurement has precise and careful in measure what do you want to be measured (Yusup, 2018). Testing validity of the measurement model done through *Convergent Validity* and *Discriminant Validity* tests. *Convergent Validity* aims for prove is each indicator item grouped into the appropriate construct or no. Test results *Convergent Validity* is determined through mark *loading factor* on each item indicators and values *Average Variance Extracted* (AVE) each research model construct. All indicator items produce mark *loading factor* above 0.60 and every construct also produces AVE value is above 0.50. In validity testing convergent, all items in our variables have fulfil loading factor value and AVE value as shown in the picture following .
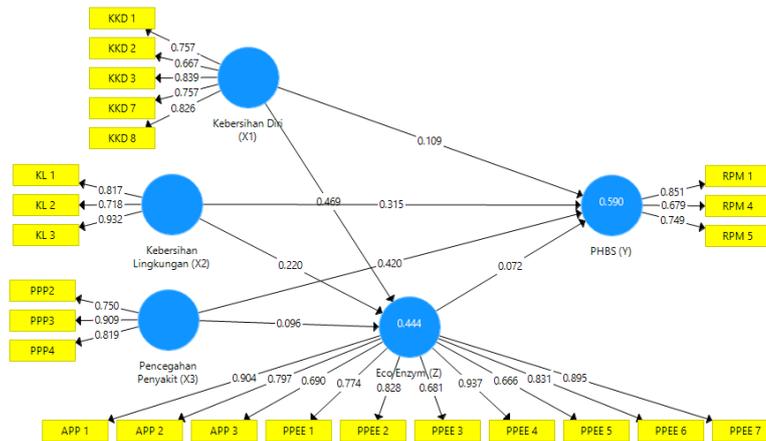
Figure 1. Validity Test Convergent -Loading Factor Value

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Eco Enzym (Z)	0.938	0.943	0.948	0.649
Kebersihan Diri (X1)	0.828	0.835	0.880	0.595
Kebersihan Lingkungan (X2)	0.770	0.866	0.865	0.684
PHBS (Y)	0.658	0.722	0.806	0.582
Pencegahan Penyakit (X3)	0.771	0.787	0.867	0.687

Figure 2. Deep AVE test validity convergent

Whereas *Discriminant Validity* aims for ensure that mark *cross loading* on constructs alone must more big compared to with mark *cross loading* on constructs other. Test output *Discriminant Validity* with approach *cross loading* shows that something construct more big compared to with mark *cross loading* if group into other constructs. On testing this show that all variable has get away cross loading test because value more tall than the group other variables .

	Fornell-Larcker Criterion	Cross Loadings	Heterotrait-Monotrait Ratio (H...	Heterotrait-Mono
	Eco Enzym (Z)	Kebersihan Diri...	Kebersihan Lin...	PHBS (Y)	Pencegahan P...
APP 1	0.904	0.447	0.368	0.358	0.420
APP 2	0.797	0.418	0.496	0.467	0.390
APP 3	0.690	0.656	0.436	0.376	0.330
KKD 1	0.490	0.757	0.358	0.315	0.274
KKD 2	0.424	0.667	0.291	0.326	0.281
KKD 3	0.491	0.839	0.485	0.482	0.396
KKD 7	0.510	0.757	0.223	0.371	0.335
KKD 8	0.469	0.826	0.494	0.403	0.448
KL 1	0.419	0.443	0.817	0.458	0.643
KL 2	0.156	0.233	0.718	0.477	0.268
KL 3	0.578	0.480	0.932	0.677	0.576

Figure 3. *Cross loading value of* validity test discriminant

Apart from that, discriminant validity testing uses approach *fornell larcker* pointed out that mark *fornel* from each indicator is a variable more tall compared to with indicators of other variables.

	Fornell-Larcker Criterion	Cross Loadings	Heterotrait-Monotrait Ratio (H...	Heterotrait-Monotrait Ratio (H...	Copy to Clipboard:

	Eco Enzym (Z)	Kebersihan Diri (X1)	Kebersihan Lingkungan (X2)	PHBS (Y)	Pencegahan Penyakit...
Eco Enzym (Z)	0.806				
Kebersihan Diri (X1)	0.619	0.772			
Kebersihan Lingkungan (X2)	0.506	0.484	0.827		
PHBS (Y)	0.485	0.496	0.664	0.763	
Pencegahan Penyakit (X3)	0.444	0.453	0.619	0.696	0.829

Figure 4. Fornel value larcker on validity testing discriminant

That is, the entire measurement model declared valid and reliable Because fulfil required criteria or in a way theory can said that every indicator truly measure the construct .

b. Reliability Test

Reliability Test problematic the extent of consistency tool measure (indicator) used or in other words test is indicator the can reliable and constant consistent If measurement the removed (Yusup, 2018). Reliability something construct in the use of the SEM PLS model can determined from mark *Composite Reliability (CR)* or The resulting Cronbach *'s Alpha (CA)*. Something construct said reliable if the Composite is Reliable must own mark more of 0.7 and Conbrach Alpha has mark more from 0.6 for can passed the reliability test. Reliability test results from all over our variables are appropriate with Figure 5. By comprehensive, measurement model proposed fulfil all over criteria and requirements It means all instrument reliable, consistent, and able accountable .

	Cronbach's Alpha	rho_A	Composite Reliability	Average Variance Extracted (AVE)
Eco Enzym (Z)	0.938	0.943	0.948	0.649
Kebersihan Diri (X1)	0.828	0.835	0.880	0.595
Kebersihan Lingkungan (X2)	0.770	0.866	0.865	0.684
PHBS (Y)	0.658	0.722	0.806	0.582
Pencegahan Penyakit (X3)	0.771	0.787	0.867	0.687

Figure 5. CR and CA test

Structural Model

a. **Testing Simultaneous**

For test model suitability whole then the output is used from SEM PLS testing is results obtained from *Model Fit* Indicators of collinearity statistics also show very results. This can proven from value namely an average of 1.7 where lift the more low from limit mark maximum namely 3.3. For research that uses a moderation model, the collinearity statistic value becomes attention main for ensure that the model is free from assumption multicollinearity. Indicator this is also a superiority from SEM-PLS applications are not presented in the testing software other SEM statistics .

	Eco Enzym (Z)	Kebersihan Diri...	Kebersihan Lin...	PHBS (Y)	Pencegahan P...
Eco Enzym (Z)				1.797	
Kebersihan Diri (X1)	1.375			1.770	
Kebersihan Lingkungan (X2)	1.771			1.858	
PHBS (Y)					
Pencegahan Penyakit (X3)	1.706			1.723	

Figure 6. Statistical collinearity test

Then For The R Square value that appears in the PHBS and Eco Enzyme variables is for Eco Enzyme variable itself by 45%. It means variables other free ie Cleanliness self (KD), Cleanliness Environment (KL), and Prevention Disease (PP) influence can moderated by Eco Enzyme at 44% while the other 56% influenced by other outside variables construct . Whereas For PHBS variable, can concluded that ability variable free (Cleanliness self (KD), Cleanliness Environment (KL), and Prevention Disease (PP)) in influence PHBS adaah amounting to 59% while the remaining 41% influenced by other outside variables research.

	R Square	R Square Adjusted
Eco Enzym (Z)	0.444	0.397
PHBS (Y)	0.590	0.543

Figure 7. R-Square test

For Predictive Relevance (Q2) value can be said that Eco Enzyme variables and PHBS variables can predict model with Good Because value consecutive more of 0.1, namely 0.239 and 0.230.

	SSO	SSE	$Q^2 (=1-SSE/SSO)$
Eco Enzym (Z)	400.000	304.458	0.239
Kebersihan Diri (X1)	200.000	200.000	
Kebersihan Lingkungan (X2)	120.000	120.000	
PHBS (Y)	120.000	92.426	0.230
Pencegahan Penyakit (X3)	120.000	120.000	

Figure 8. Q2 test

b. **Testing Partial**

Test results hypothesis in a way Partial describe 3 hypotheses no supported of the total of 3 proposed hypotheses. Table 2 shows results empirical from model testing carried out. Testing hypothesis done with evaluate *path coefficient* for determine influence from latent variables and *P-value* for determine its significance. The significance value used is 10% or 0.10. So that hypothesis will supported If acquisition The *P-Value* is <0.10.

Table 2. Testing Hypothesis Partial

	Hypothesis	*p-value*	Information
1	Hygiene (KKD) --> PHBS	0.044	Supported
2	Personal Hygiene (KKD) --> Eco Enzym (EE) --> PHBS	0.802	Not supported
3	Cleanliness Environment (KL) --> PHBS	0.098	Supported
4	Cleanliness Environment (KL) --> Eco Enzym (EE) --> PHBS	0.037	Supported
5	Prevention Disease (PPP) --> PHBS	0.096	Supported
6	Prevention Disease (PPP) --> Eco Enzyme (EE) --> PHBS	0.9	Not supported

Discussion

Based on table 2 above show that hypothesis test results partial that can explain coefficient influence between variable related. Results and analysis show that

1. **Influence Personal Hygiene (KKD) towards Clean Healthy Living Behavior (PHBS)**

   Research results shows a P-Value of 0.044 where mark this more low than limit maximum mark significance namely 0.10. matter this show that connection between cleanliness self with behavior life clean and healthy significant. It means is behavior personal hygiene and health alone influence running the Clean and Healthy Living Behavior program in the community. This thing in line with predisposing factors in theory Procede Proceed where knowledge, attitudes, beliefs, and values perception influence somebody in Act (Rizal, 2018). When someone that own beliefs and perceptions that environmental cleanliness and health that started from self alone so with itself behavior the will become habit life healthy, which is the thing the can support the PHBS program in the community (Erlina Pudyastuti, n.d.).

2. **Influence Personal Hygiene (KKD) towards Clean Healthy Living Behavior (PHBS) mediated by Eco Enzyme (EE)**

   Research results shows a P-Value of 0.802 where mark this more tall than limit maximum mark significance namely 0.10. matter this show that connection between cleanliness self with behavior life clean and healthy mediated by Eco Enzym no significant. It means is There is or No the presence of eco enzyme is not influential towards PHBS, because in level personal hygiene alone more caused due to factors of perception and belief or in other words, internal factors in self (Angga Reksa et al., n.d.). Meanwhile, Eco Enzyme is one of the media which is an external factor .

2. **Influence Cleanliness Environment (KL) towards Clean Healthy Living Behavior (PHBS)**

Research results shows a P-Value of 0.098 where mark This more low than limit maximum mark significance namely 0.10. matter this show that connection between cleanliness environment with behavior life clean and healthy significant. It means is one factor success from the PHBS program are cleanliness existing environment guaranteed (Saifuddin et al., 2021). Clean and healthy environment it various indicators such as good sanitation, environment, social support , empowerment public achieved is influencing things success of the PHBS program in public (Novianti & Nengah Muliarta, 2021).

3. **Influence Cleanliness Environment (KL) towards Clean Healthy Living Behavior (PHBS) mediated by Eco Enzyme (EE)**

Research results shows a P-Value of 0.037 where mark this more low than limit maximum mark significance namely 0.10. matter this show that connection between cleanliness environment with behavior life clean and healthy mediated by Eco Enzym significant. It means is the presence of Eco Enzyme support creation clean environment. Content sour in Eco Enzyme is capable purify river water and protect it soil (Novianti & Nengah Muliarta, 2021)PH stability. With that's what Eco Enzyme is good alternative if applied to cleanliness environment (Nasihin *et al.,* n.d.). If environment clean and healthy achieved, then the PHBS program will also success.

4. **Influence Prevention Disease (PPP) against Clean Healthy Living Behavior (PHBS)**

Research results shows a P-Value of 0.096 where mark this more low than limit maximum mark significance namely 0.10. matter this show that connection between prevention disease with behavior life clean and healthy significant. It means is prevention disease is one of the influencing factors success of the PHBS program. Prevention disease can done with method guard pattern life healthy, healing disease before the more serious, routine do health check, and search source Health (Rizal, 2018)information. This thing in line with Health Believe Model theory where somebody will take related actions with health If they feel that they can avoid condition poor health, having hope positive that recommended action will protect they from condition poor health, and believe that they can succeed do action recommended health (Rizal, 2018).

5. **Influence Prevention Disease (PPP) against Clean Healthy Living Behavior (PHBS) mediated by Eco Enzyme (EE)**

Research results shows a P-Value of 0.9 where mark this more tall than limit maximum mark significance namely 0.10. matter this show that

connection between prevention disease with behavior life clean and healthy mediated by Eco Enzym no significant. It means is there is or whether there is Eco Enzyme, precautions disease still can implemented. Basically neither is Eco Enzyme is things that can duconsumption and only can used as usage outside.

4. CONCLUSION

The 6 hypotheses tested in the research here are 4 of them own significant influence namely the cleanliness variable (KKD) towards PHBS, Environmental Health (KL) , and Prevention Disease (PPP) in PHBS. Meanwhile, the other 2 variables are personal health (KKD) and prevention variables disease (PPP) mediated by Eco Enzyme (EE) against PHBS shows no results significant. Your own health is one of the supporting factors for the originating PHBS program from self Alone or a person's internal factors individual, whereas if mediated by eco enzymes instead the result become No significant because eco enzyme is another factor that influences PHBS external. Then, eco enzyme itself is fluid just fermentation used as usage outside and not consumed, therefore That from facet prevention disease (PPP) will No suitable if mediated by eco enzyme because several indicators of prevention disease is do treatment (incl drug in) in independent. However, eco enzyme strengthens environmental health variables, because the benefits of eco enzyme itself very lots for environment a number of among them is water purifier and care stabilization Ph land so that matter the suitable or significant with environmental health variables in framework supports PHBS. Implications from study this is know bring very eco enzyme liquid suitable if used For supports environmental health factors Because the benefits are varied. Additionally, with the presence of eco enzymes is one of them effort in subtraction trash that has been pile up especially rubbish organic. This study first to research the effect of eco enzyme on PHBS. For study furthermore possible can multiply respondents who wish researched, improved quality testing in study including choose the appropriate indicator, and use it method mixture To use support analysis from interpretation of the data that has been done, because Still at least study about the eco enzyme alone.

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