The Relationship between Multicultural Aspects and Environmental Sanitation Behaviour At Muaragembong , Bekasi Regency, West Java

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Abstract

This study aims to investigate the relationship between several multicultural aspects, namely social justice, innovation and cohesiveness with environmental sanitation behaviour in households in Muaragembong, West Java. The method used is a survey with a correlational study involving 120 samples. Data were analyzed using ANOVA. The results showed that there was a positive and significant relationship between these variables individually and collectively. Therefore, it can be concluded that environmental sanitation behaviour can be improved by improving social justice, innovativeness and cohesiveness

Keywords: environmental sanitation behaviour, social justice, innovativeness, cohesiveness

1. Introduction

Adequate sanitation facilities are the basis of health development. However, in reality, many regions around the world, including Indonesia, do not have adequate sanitation facilities to support their population. As a result, various diseases caused by viruses and bacteria become rampant. It is true that the government has made various effort to solve the sanitation problem. However, there are many obstacles and problems that have to be solved.

Amaliah found in her research that there is a significant relationship between environmental sanitation and cultural factors with diarrhoea [1]. Similar result was also found by Ferllando & Asfawi, who found that there is a significant relationship between mother's personal hygiene and diarrhoea in her children. These findings show that poor environmental sanitation may lead to health problems and vice versa [2].

Some of the variables that may be related to environmental sanitation behaviour are social justice, innovativeness and cohesiveness. Social justice is an absolute requirement in human relations. Social justice is something that becomes a basis for the equality of human welfare. In general, the idea of justice can be seen as a specification of ideas of morality and dignity [3], In terms of quality, despite the fact that social justice cannot be realized to the fullest, but it will always affect people's desire to live better [4].

Innovation is a phenomenon commonly occurs in a society that is experiencing a transformation towards modernity. Innovation arises from ideas and knowledge based on the experiences that has been acquired by a person [5], while innovativeness is closely related to how fast someone or a group can receive and adopt new ideas. In the innovation process, the role of knowledge is very important because it not only determine the input, but also the output of the transformation process [6]. Learning can lead to innovation because it is based on exploration stages that can lead to discovery and improvement through trial and error [7].

To realize innovation, cohesive support from the community is really important. Cohesiveness is the closeness of people in a relationship. Cohesiveness is an important factor that may decide how good a group can work together to achieve mutual success, equality, or justice. The success of an organization is greatly influenced by the level of one's feelings towards the team and the motivation to maintain the cohesiveness of its members [8]. Cohesion in society is a dynamic process that is reflected in the tendency of groups to stick together in achieving goals [9]. This dynamic process is reflected in the tendency of groups to stick together in pursuit of their instrumental goals or to fulfill the affective needs of members [10]. The relationship between cohesiveness and productivity usually depends on the norms related to performance established by the group [11].

Muaragembong is located on the north coast of Bekasi Regency, about 75 km from Jakarta. People living there usually make a living by cultivating fish in ponds and working as farmers. A long dry season causes the area to become very dry, while a long rainy season may causes flooding in the area, as sea water and the Citarum river overflow. Data from the Bekasi District Health Office shows that only 46.64% of people living in Muaragembong has adequate sanitation [12]. The author found in her preliminary observations that the coastal area of Muaragembong experienced severe abrasion. Environmental damage is exacerbated by the accumulated garbage mixed with mud from flooding. The population in Muaragembong is accustomed to unsanitary conditions. The poor condition in Muaragembong has attracted the attention of several non-governmental organizations that are interested to help educate residents to implement a healthier lifestyle, including building specific bathroom and washing facilities instead of doing them at the river.

The problems examined in this study are: (a) Is there a relationship between social justice and environmental sanitation behaviour ?; (b) Is there a relationship between innovativeness and environmental sanitation behaviour ?; (c) Is there a relationship between cohesiveness and environmental sanitation behaviuor ?; (d) Is there a relationship between social justice, innovativeness and cohesiveness (collectively) with environmental sanitation behaviour?

II.   RESEARCH METHOD

This research is an explanatory research, intended to examine the relationship between variables and how strong the relationship is (if any), using a quantitative approach with survey. Sampling was done using multistage random sampling method. The number of respondents selected was 120 households. The relationship between research variables can be seen in the following figure:

Notes :

Y = Environmental sanitation behaviour

X1 = Social justice

X2 = Innovativeness

X3 = Cohesiveness

III.   RESULT AND DISCUSSION

The relationship between social justice and environmental sanitation behaviour was calculated using simple regression analysis. The results of the regression analysis was a formula of $\hat{Y} = 22.18 + 0.78 X1$. The results of the analysis are presented in Table 1:

Table 1. The results of the ANOVA test on the regression model of $\hat{Y} = 22.18 + 0.78 X1$

Source of Varians	DF	SS	ASS	F_{count}	F_{table} (α)	
					0.05	0.01
Regression (a)	1	151230				
Regression (b/a)	1	1055.7	1055.7			
Residual	118	3209.4	27.20	38.8^{**}	3.93	6.86
Linearity deviation	13	433.70	33.31	1.9^{ns}	1.84	2.32
Error	105	2775.7	26.44			
Total	**120**	**155495**				

The table above shows a very significant and linear relationship between social justice and environmental sanitation behaviour. The correlation coefficient between social justice and environmental sanitation behavior (ry1) is 0.59. The result of t test for tcount > ttable α = 0.01 or 7.60 > 2.33. This means that the better the social justice, the better the environmental sanitation behaviour will be. The contribution of social justice to

environmental sanitation behavior is 0.35 (ry12). This means that if the influence of innovativeness and cohesiveness is not considered, social justice will influence environmental sanitation behaviour by 35%.

The results confirmed statement, "social justice …as process of working toward, and the condition of, meeting everyone's basic needs and fulfilling everyone's potential to live productive and empowered lives as participating citizens of our global community. "Basic needs" include not just food, clothing, and shelter, but also feeling safe, secure, and cared for. Fulfilling our potential requires education and health care, as well as respect, dignity, and the opportunity to pursue our dreams."[13].

The relationship between innovativeness and environmental sanitation behaviour was also calculated using simple regression analysis. The results of the regression analysis is the formula of $\hat{Y} = 4.58 + 0.79 X2$. The results of the test is presented in Table 2.

Table 2. The results of the ANOVA test on the regression model of $\hat{Y} = 4.58 + 0.79 X2$

Source of Varians	DF	SS	ASS	F_{count}	F_{table} (α)	
					0.05	0.01
Regression (a)	1	151230				
Regression (b/a)	1	1500.1	1500.1			
Residual	118	2764.9	23.4	64.1^{**}		
					3.93	6.86
Linearity deviation	20	610.40	30.5	1.3^{ns}	1.84	2.32
Error	98	2154.5	23.0			
Total	**120**	**155495**				

Table 2 shows a very significant relationship between innovativeness and environmental sanitation behaviour. The correlation coefficient between innovativeness and environmental sanitation behaviour (ry1) is 0.69. The results of the t test for tcount > ttable $\alpha = 0.01$ or 10.30 > 2.33. This means that the better the innovativeness, the better the environmental sanitation behaviour. The value of the contribution of innovativeness to environmental sanitation behaviour is 0.48 (ry22). This means that if the influence of social justice and cohesiveness is not considered, innovativeness will influence environmental sanitation behaviour by 48%.

The results confirmed Rodriguez and Wiengarten's research that showed that there is a direct effect of process innovativeness capability on environmental innovativeness capability [14]. Someone with better innovativeness capability will require less time to adopt new ideas compared to others [15].

The relationship between cohesiveness and environmental sanitation behaviour was also calculated using simple regression analysis. The results of the regression analysis is the formula of $\hat{Y} = 28.93 + 0.08 X3$. The results of the test is presented in Table 3.

Table 3. The results of the ANOVA test on the regression model of $\hat{Y} = 28.93 + 0.08 X3$

Source of Varians	DF	SS	ASS	F_{count}	F_{table} (α)	
					0.05	0.01
Regression (a)	1	151230				
Regression (b/a)	1	1700.5	1700.5			
Residual	118	2564.9	21.7	78.3^{**}		
					3.93	6.86

Linearity deviation	18	595.8	33.1	1.5^{ns}	1.84	2.32
Error	100	2154.5	21.5			
Total	**120**	**155495**				

Table 3 shows a very significant and linear relationship between cohesiveness and environmental sanitation behavior. The correlation coefficient between cohesiveness and environmental sanitation behavior (ry3) is 0.73. The results of the t test for tcount > ttable α = 0.01 or 11.15 > 2.33. It means that the correlation coefficient between cohesiveness and environmental sanitation behavior is very significant. This means that the higher the cohesiveness, the better the environmental sanitation behaviour will be. The value of cohesiveness contribution to environmental sanitation behaviour is 0.53 (ry32). This means that if the influence of social justice and innovativeness is not considered, cohesiveness will influence environmental sanitation behaviour by 53%. The results is consistent with Carron & Brawley's research, which showed that cohesiveness may greatly influence the performance and effectiveness of a group [16].

The relationship between social justice, innovativeness, cohesiveness (collectively), and environmental sanitation behaviour was done using multiple regression analysis. The result of the analysis is the formula $\hat{Y}$ = 13.86 + 0.46 X1 + 0.49 X2 + 0.54 X3. The results of the significance and linearity analysis is presented in Table 4.

Table 4. The results of the ANOVA test on the multiple regression model of $\hat{Y}$ = 13.86 + 0.46 X1 + 0.49 X2 + 0.54 X3

Source of Varians	DF	SS	ASS	F_{count}	F_{table} (α)	
					0.05	0.01
Total	120	155495				
Coefficient (b_0)	1	151230				
TD	119	4265				
Regression	3	2494.5	831.5	$54.3^{**)}$	1.84	2.32
Residual	116	1770.5	15.3			

Table 4 shows a significant relationship between social justice, innovativeness, and cohesiveness (collectively), and environmental sanitation behaviour. The multiple correlation coefficient found during the multiple regression analysis (ry123) is 0.81. It means that the higher social justice, innovativeness, and cohesiveness, the better the environmental sanitation behaviour will be. The value of the coefficient of determination of the three independent variables (ry.1,2,3)2 = R = 0.66, which means that the three independent variables may affect environmental sanitation behaviour by 66%.

The value of the influence of the three independent variables on the environmental sanitation behaviour is presented in Table 5 below:

Table 5. The influence of each independent variables on the environmental sanitation behaviour

Dependent variables	Partial correlation coefficient	Rank
X_1	$r_{y1.23} = 0,33$	Second
X_2	$r_{y2.13} = 0,32$	Third
X_3	$r_{y3.12} = 0,47$	First

Table 5 shows that the cohesiveness has higher influence than social justice and innovativess on environmental sanitation behaviour. However, all variables have quite significant influence. It means that in order to develop environmental sanitation behaviour, all three variables must be considered.

The results of the research are :

a.   Social justice has a positive relationship with environmental sanitation behaviour, which means that social justice can influence environmental sanitation behaviour. The better social justice is, the better environmental sanitation behaviour will be.

b.   Innovativeness has a positive relationship with environmental sanitation behaviour, which means that innovativeness can influence environmental sanitation behaviour. The better the innovativeness is, the better environmental sanitation behaviour will be.

c.   Cohesiveness has a positive relationship with environmental sanitation behaviour, which means that Cohesiveness can influence environmental sanitation behaviour. The better the cohesiveness is, the better environmental sanitation behaviour will be.

d.   Social justice, innovativeness and cohesiveness (collectively), which means that the three variables can influence environmental sanitation behaviour.

Research limitations

a.   The method used in this research is a survey using a correlation design. Of course, there are many other methods or designs that can offer a more comprehensive explanation

b.   Environmental sanitation behavior variables are influenced by many other factors, such as geographical conditions, locus of control, knowledge, and others

c.   Measurement of research variables does not cover all the indicators that should be measured

d.   There are biased answers from the respondent due to the lack of control over the instruments filled by the respondent.

IV.   CONCLUSION AND RECOMMENDATION

Environmental sanitation behaviour can be improved through several multicultural aspects, namely social justice, innovativeness and cohesiveness. There are other factors that may also affect environmental sanitation behaviour that should be considered for future research lots of factors that need to be considered other than cohesiveness, social justice and innovativeness, including leader behaviour, personality, gender, ability, trust, and ethics. In addition, more complex analysis method such as path analysis, factor analysis and SEM (Structural Equation Modeling) can also be used.

The government and policymakers should make more efforts to provide opportunities for the community to play a role in activities related to improving environmental sanitation behaviour.

V.   ACKNOWLEDGEMENT

References

[1]   Amaliah, S. (2010). Hubungan sanitasi lingkungan dan faktor budaya dengan kejadian diare pada anak balita di desa toriyo Kecamatan Bendosari Kabupaten Sukoharjo. Paper presented at the Prosiding seminar nasionaL & Internasional.

[2]   [Ferllando, H. T., & Asfawi, S. (2015). Hubungan Antara Sanitasi Lingkungan dan Personal Hygiene Ibu dengan Kejadian Diare pada Balita di Wilayah Kerja Puskesmas Mangkang. VISIKES: Jurnal Kesehatan Masyarakat, 14(2).

[3]   Surovtsev, V., & Syrov, V. (2015). Outlooks of J. Rawls's theory of justice. Procedia-Social and Behavioral Sciences, 166, 176-181.

[4]   Kornienko, A. A., & Syryamkina, E. V. (2015). Justice as an indicator of well-being in modern society. Procedia-Social and Behavioral Sciences, 166, 122-126.

[5]   Tidd, J., & Bessant, J. R. (2018). Managing innovation: integrating technological, market and organizational change: John Wiley & Sons.

[6] Urbancova, H. (2013). Competitive advantage achievement through innovation and knowledge. Journal of competitiveness, 5(1).

[7] Dukas, R. (2013). Effects of learning on evolution: robustness, innovation and speciation. Animal Behaviour, 85(5), 1023-1030.

[8] McShane, S. L., Von Glinow, M. A. Y., & Von Glinow, M. A. (2005). Organizational behavior. New York, NY: McGraw-Hill Irwin.

[9] Carron, A. V. (1982). Cohesiveness in sport groups: Interpretations and considerations. Journal of Sport psychology, 4(2).

[10] Weinberg, R., & Gould, D. (2007). Psychological foundations in sport and exercise.

[11] Robbins, S. P., & Judge, T. (2003). Essentials of organizational behavior (Vol. 7). Upper Saddle River, NJ: Prentice Hall.

[12] Dinkes-Bekasi. (2017). Profil Kesehatan Kabupaten Bekasi Tahun 2016.

[13] Wade, R. C. (2007). Service-learning for social justice in the elementary classroom: Can we get there from here?. Equity & Excellence in Education, 40(2), 156-165.

[14] Rodriguez, J. A., & Wiengarten, F. (2017). The role of process innovativeness in the development of environmental innovativeness capability. Journal of cleaner production, 142, 2423-2434.

[15] Roger, Everertt M (1983). Diffusion of innovation. New York: The Free Press.

[16] Carron, A.V., & Brawle, L.R. (2012). Cohesion Conseptual and Measurement Issues. Small Group Research, 43(6), 726-743.