



## **THE EMPOWERMENT OF MOSLEM BOARDING SCHOOL FOR THE SUSTAINABLE PREVENTION AGAINST SCABIES DIEASE**

Nugroho NP <sup>1)</sup> and Zaenal Fanani, <sup>2)</sup>

- 1) Lecturer of Economic Social of Animal Husbandry, University of Kahuripan Kediri
- 2) Lecturer of Postgraduate Program in National Defense Study, University of Brawijaya Malang

### **Abstrak**

Pondok Pesantren Tebuireng Jombang is a recognizable Moslem Boarding School in Jombang which is occupied by 4,560 students. It involves 3,230 males and 1,530 females. Empowerment is needed in terms of social, economic and culture. The most dominant issue is the cleanliness or sanitation of the environment of boarding school or of the students. Both are classical issues at Pondok Pesantren Tebuireng Jombang. Environment sanitation is emphasized on skin health due to the risk of scabies disease. Location of research is Pondok Pesantren Tebuireng Jombang. The object of research includes all staffs, employees, leaders and students of Pondok Pesantren Tebuireng Jombang. The ultimate goal of this research is to formulate the model of human resource empowerment at Pondok Pesantren Tebuireng Jombang to support sustainable environmental management for scabies disease prevention. Data are analyzed using a model of *generalized structure component analysis* (GesCA). Based on the result of research and discussion, it is concluded that Organization factor is influential directly, but insignificantly, to environmental sustainability. Organization factor is influential indirectly but significantly, through human resource empowerment, to environmental sustainability freed from scabies disease.

**Keywords:** Boarding School, scabies disease, human resource

## PEMBERDAYAAN PONDOK PESANTREN UNTUK PENCEGAHAN BERKELANJUTAN TERHADAP PENYAKIT SCABIES

### Abstrak

Pondok Pesantren Tebuireng Jombang adalah Pondok Pesantren Muslim yang diakui di Jombang yang dihuni oleh 4.560 siswa. Ini melibatkan 3.230 pria dan 1.530 wanita. Pemberdayaan diperlukan dalam hal sosial, ekonomi dan budaya. Masalah yang paling dominan adalah kebersihan atau sanitasi lingkungan sekolah asrama atau para siswa. Keduanya merupakan masalah klasik di Pondok Pesantren Tebuireng Jombang. Sanitasi lingkungan ditekankan pada kesehatan kulit karena risiko penyakit kudis. Lokasi penelitian adalah Pondok Pesantren Tebuireng Jombang. Objek penelitian meliputi semua staf, karyawan, pimpinan dan siswa Pondok Pesantren Tebuireng Jombang. Tujuan akhir dari penelitian ini adalah untuk merumuskan model pemberdayaan sumber daya manusia di Pondok Pesantren Tebuireng Jombang untuk mendukung manajemen lingkungan yang berkelanjutan untuk pencegahan penyakit kudis. Data dianalisis menggunakan model analisis komponen struktur umum (GesCA). Berdasarkan hasil penelitian dan diskusi, disimpulkan bahwa faktor Organisasi berpengaruh langsung, tetapi tidak signifikan, terhadap kelestarian lingkungan. Faktor organisasi berpengaruh secara tidak langsung tetapi signifikan, melalui pemberdayaan sumber daya manusia, terhadap kelestarian lingkungan yang terbebas dari penyakit kudis.

**Kata Kunci:** Pondok pesantren, Penyakit scabies, Sumber daya manusia

### INTRODUCTION

Scabies is a skin disease caused by infestation and sensitization to the mite species, *Sarcoptes scabiei of hominis variant* and its products. This disease is infectious at near contact between humans. Infection is mostly found among children and adults who are sexually active. Main complaint of the sufferer is itchiness (pruritis). Scabies represents a zoonotic disease that attacks the skin, and it is easily contagious from human to human or from animal to human or the

reverse. It does not exclude any races and communities in the whole words. The causal agent is louse or mite called *Sarcoptes scabiei*. Some factors are facilitating the infection of this disease. These include low socio-economic factor, poor personal hygiene, less sanitized environment, less supportive behavior to health, and population crowd. The most dominant factors are poverty and poor personal hygiene. Both factors are greatly obvious in developing countries, and therefore, the countries have the greatest number of scabies disease sufferer. Scabies disease prevalence in Indonesia is 6-27 % among general population, and it tends to be higher among children and teenager (Notoatmojo, 2007). Poor environmental sanitation in Moslem Boarding School (Pondok Pesantren) is a dominant factor that triggers high infection rate or high prevalence rate of scabies disease among students in boarding school.

Scabies spreads easily either directly by only direct touching with the sufferer, or indirectly through cloth, bed cover, towel, pillow, water or hair comb used by the sufferer in not clean condition after usage. The filthy material brings higher possibility of mite *Sarcoptes scabiei* to exist. Scabies induces itchiness on some parts of skin, such as the gap of fingers, elbow, and groin. Scabies is identified as the disease of boarding students. The main cause is of course, filthy habit, poor sanitation, less nutrient, and too humid room lacking of direct sunbeam. Scabies disease infects fast to any persons who live together with the sufferer. The medication, therefore, must be simultaneously and extensively given to all persons and environment where scabies disease strikes. Individual medication is still susceptible to the problem of scabies disease relapse (Pawening, 2009).

Scabies can proceed from low socio-economic factor, poor hygiene concerning with taking a bath, cloth change, and towel use, and worst, unhealthy sexual relationship. The disease is often found in places such as boarding house, orphanage, prison or slum. The environment of Moslem Boarding School and its susceptibility to scabies disease are reported by Isa Ma'rufi et al (2012) who examine some Moslem Boarding School in Lamongan. The result shows that environmental sanitation factor is influential to the reduction of scabies disease prevalence. This sanitation factor includes dirty bathroom, improper ventilation in bedroom, less supportive behavior to healthy life, and poor personal hygiene among boarding school students.

The most dominant issue is the cleanliness or sanitation of the environment of boarding school or also of the students. Both are classical issues at Pondok Pesantren Tebuireng Jombang. Environment sanitation is given priority on the health of skin that distributes scabies disease. Scabies attacks almost all Moslem Boarding Schools in Indonesia. Dealing with poor student sanitation and less hygienic facilities, the boarding schools must ensure cleanliness of the environment in integrated and sustainable ways to ensure the progress of learning-teaching activity at Moslem Boarding School.

### **Research Problems**

As shown in the background, some research problems are determined:

1. To what extent of and what is the indicator of human resource empowerment at Pondok Pesantren Tebuireng Jombang for scabies disease prevention?
2. What factors are influencing human resource empowerment at Pondok Pesantren Tebuireng Jombang for scabies disease prevention and environmental management in sustainable way?
3. Is empowerment a strong moderator at Pondok Pesantren Tebuireng Jombang for scabies disease prevention and environmental management in sustainable way?
4. How is the effect of empowerment indicator on environmental management for sustainable scabies disease prevention?
5. How is the simultaneous effect among the factors influencing empowerment (individual factor, group factor and organization factor) on environmental management for sustainable eradication of scabies disease at Pondok Pesantren Tebuireng Jombang?
6. How is the empowerment model used to improve environmental management for sustainable eradication of scabies disease?

### **Research Objective**

Based on research background and research problems, the objective of research is to understand and to analyze:

1. The indicator of human resource (HR) empowerment at Pondok Pesantren Tebuireng Jombang for scabies disease prevention.

2. Factors influencing human resource empowerment at Pondok Pesantren Tebuireng Jombang for scabies disease prevention and environmental management in sustainable way,
3. Empowerment as a strong moderator at Pondok Pesantren Tebuireng Jombang for scabies disease prevention and environmental management in sustainable way.
4. The indicator of environmental management for sustainable eradication of scabies disease at Pondok Pesantren Tebuireng Jombang
5. The simultaneous effect from the factors influencing empowerment (individual factor, group factor and organization factor) on environmental management for sustainable prevention against scabies disease at Pondok Pesantren Tebuireng Jombang.
6. The empowerment model that can be used to improve environmental management for sustainable eradication of scabies disease.

## **METHOD OF RESEARCH**

### **Research Approach**

Relevant with the characteristic of research problems, method of research is qualitative research with case study approach. Qualitative research is attempting to understand phenomena experienced by research subjects, and it can be behavior, perception, motivation, action, and others, in holistic way through description, words and language, in special and scientific context by using several scientific methods (Moloeng 2006).

### **Time and Location of Research**

Research is planned for 10 months, started from 10 August 2015 to 11 March 2016. This 10-month schedule is considered because it may help ensuring that the collected data are complete with adequate validity. Research location is Pondok Pesantren Tebuireng Jombang. The object of research includes all staffs, employees, leaders and students of Pondok Pesantren Tebuireng Jombang.

### **Research Type**

Two types of research are included, precisely case study and explanatory study.

### **Population**

Population is the sum of all analysis units from which the characteristic of population is estimated (Mulyana, 2001). Nasution (1992) defines population as the entire research objects including human, thing, animal, plant, symptom, exam grade or event as data source with certain characteristic in a research.

By taking account this definition, it can be said that population is the entire subjects with certain character or nature to be estimated. The population of this research is all stakeholders at Pondok Pesantren Tebuireng Jombang, including students, teachers, parents and management.

### **Sample of Research**

Sample is the representative part of the population. Muhajir (2002) explains however that for a merely guide, if the subject is less than 100 persons, it is better to take all, and the research will be called a population research. In the case of more than 100 persons, the sample can be 10-15% or 20-25% or over that. Analysis technique is GeSCA model (Generalized Structure Component Analysis), and thus, the minimum count for sample is 5 to 10 persons, multiplied with the number of indicator. There are 11 indicators, and therefore, minimum sample is  $5 \times 11 = 55$  respondents. In this research, the sample has been 100 persons, and it already meets the criteria of minimum sample.

Sample must represent all stakeholders in the boarding school, including individual, group and organization. The sample consists of student, parent, teacher, boarding school manager, teacher team, student learning group, parent association, and boarding school management.

### **GeSCA Method**

The ultimate goal of this research is to formulate the model of human resource empowerment at Pondok Pesantren Tebuireng Jombang to support sustainable environmental management for scabies

disease prevention. The analysis instrument is a model of *generalized structure component analysis* (GeSCA). Several steps considered in analyzing data with GeSCA method involve:

- Making a Structural Model (*relationship between latent variables*)
- Making a Measurement Model (*reflexive or formative*)
- Constructing a Path Diagram
- Converting Path Diagram to Equation System
- Estimating Path Coefficient, *Loading* and *Weight*
- Evaluating *Goodness of Fit*
- Testing the Hypothesis (*Resampling, Bootstrapping*)

Human resource empowerment model at Pondok Pesantren Tebuireng Jombang is supporting sustainable environmental management for scabies disease prevention, and also becoming a base to develop a structural model based on theory, result of empirical research, and the relation among variables in other science discipline.

Research develops a measurement model through constructs by applying principal component analysis. The analysis assumes that latent variable is made (formed) from several indicators. In this case, all measurement models are formative. Human empowerment rate in fishery and marine fields that supports blue economic is arranged from several indicators such as welfare, access to resources, participation, critical awareness on problems to resolve and decision making for resources. Human resource empowerment rate is influenced by individual factor and organization factor of the boarding school.

## RESULT OF RESEARCH AND DISCUSSION

### Path Diagram

Path diagram is the output result from the online application of GeSCA. The making is based on structural model and measurement model proposed by the research. The analysis against factors influencing human resource empowerment at Pondok Pesantren Tebuireng Jombang for scabies disease prevention is shown in the

following figure 1. The figure shows that individual factor is influential insignificantly, and so is group factor. Organization factor is influential negatively and significantly to human resource empowerment at Pondok Pesantren Tebuireng Jombang. The organization (boarding school management) must be proactive by taking several boarding school-based activities, such as: (a) prevention against dissemination of scabies disease through periodic checkup with health officer (physician, local physician, midwife, medical officer); (b) prevention against scabies disease by organizing a medication event against scabies disease or other disease; (c) quick treatment for self or other at boarding school when sick comes; (d) attending the education/training/counseling sessions in relation with scabies disease prevention or general health; (e) searching for information about scabies disease prevention and general health and reading relevant books; (f) improving practical experience in preventing scabies disease; (g) managing health security (health insurance, retirement saving, social and employment security, BPJS); (h) taking a participation in the problem-solving for prevention against scabies disease dissemination at boarding school and surrounding environment; (i) supporting the relevant agencies (the related Health Official) that support problem-solving for prevention against scabies disease dissemination at boarding school and surrounding environment; (j) showing high enthusiasm to support the leader of boarding school in preventing scabies disease dissemination; (k) supporting and developing new network in health sector for scabies disease prevention at boarding school; (l) high initiative to develop new method to deal with scabies disease and other health problem. If group factor is more active, then it creates high level of dependence by organization on group. Scabies disease prevention may easily halt if organization moves without improving the self-sufficiency of individual and group. Therefore, coefficient between group factor and human resource empowerment is negative.

The analysis is conducted on whether empowerment is the strong moderator at Pondok Pesantren Tebuireng Jombang for scabies disease prevention and environmental management in sustainable way. As shown by result of analysis with GeSCA, path diagram shows that individual factor is influential insignificantly to human resource empowerment. But individual factor has a negative and significant



effect on environmental sustainability freed from scabies disease. It takes reference from a theory that empowerment program for individual is more difficult than for group and organization. Individual factor negatively influences environmental sustainability freed from scabies disease. It means that in eradicating scabies disease, boarding school organization cannot merely rely on individuals. Although individual can be active, competent and skillful human resources, it is not proper for organization to merely depend on individual in eradicating scabies disease. Finally, there shall be a balance when organization must not depend on individual, and it is dealt with empowerment. Individual or group shall not be depended by organization in managing environmental sustainability freed from scabies disease.

Table 1. Structural Model of Human Resource Empowerment at Pondok Pesantren Tebuireng Jombang For Scabies Disease Eradication.

Relation between Variables	Path Coefficients		
	Estimate	SE	CR
FI->PS	0.091	0.182	0.5
FI->KL	-0.255	0.137	1.86*
FK->PS	0.049	0.167	0.29
FK->KL	0.403	0.169	2.39*
FO->PS	-0.862	0.074	11.66*
FO->KL	0.267	0.244	1.09
PS->KL	1.128	0.273	4.14*

The figure also indicates that human resource empowerment for scabies disease prevention is the strong moderator for boarding school organization in taking a responsibility for environmental sustainability and also for scabies disease eradication. It means that the role of environmental sustainability in scabies disease eradication is significantly influential through human resource empowerment. Organization factor has a direct but insignificant effect on environmental sustainability in eradicating scabies disease. Through human resource empowerment, organization factor can influence environmental sustainability but coefficient rate is negative, meaning that organization role is producing a dependence on organization by

individual and group. The index of environmental sustainability in scabies disease eradication describes the result of the calculated environmental sustainability in scabies disease eradication. The index is counted for 81 percent, and it is good. It needs still to keep the balance between individual, group, and organization to avoid the creation of the dependence among three stakeholders at Pondok Pesantren Tebuireng Jombang. The implication of Human Resource Empowerment Model at Pondok Pesantren Tebuireng Jombang to environmental sustainability for scabies disease eradication can be seen in the following Table 2.

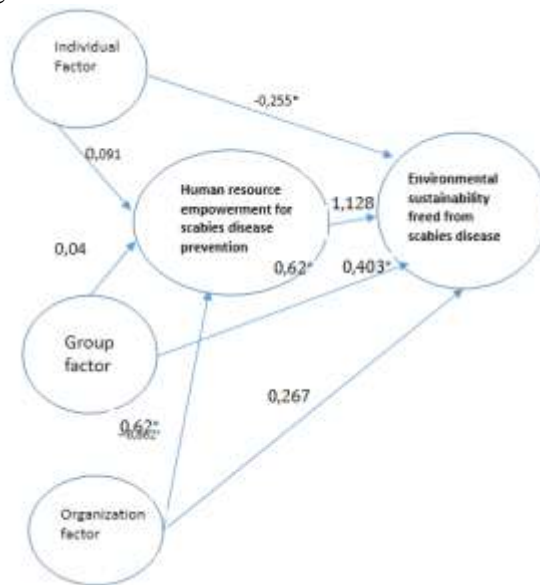


Figure 1. The Making of the Path Diagram of Human Resource Empowerment Model for Scabies Disease Prevention based on The Result of Analysis with GeSCA.

Table 2. The Implication of Human Resource Empowerment Model at Pondok Pesantren Tebuireng Jombang

<b>Relation between Variables</b>	<b>Implication</b>	<b>Suggestion</b>
FI->PS	Individual factor is influential insignificantly to human resource empowerment. Individual must improve their welfare, access, participation, critical awareness on problem, and decision-making.	Human resource at boarding school shall improve sense of empowerment through their critical awareness on problem and their decision-making competency for scabies disease eradication.
FI->KL	Individual factor negatively influences environmental sustainability. It means that if individual is becoming active, competent and skillful, environmental sustainability will be lower. The engagement of individual to organization is usually very short because after graduate, no time and effort are left for boarding school interest. Therefore, environmental sustainability is becoming the responsibility of boarding school.	Individual who is active, competent and skillful in managing environmental sustainability may create organization dependence on this individual for environmental sustainability. Student and parent, and also teacher are not permanent element of boarding school. It is suggested for individual to not create dependence atmosphere by organization in the case of environmental sustainability.
FK->PS	Group factor is influential insignificantly to human resource empowerment. Groups in boarding school may be parent association, teacher team, learning group, management group, etc. Each group must improve welfare, access, participation, and critical awareness of the problem and decision-making.	Human resource at boarding school, especially the groups, can improve empowerment through critical awareness on problem and decision-making for scabies disease eradication.
FK->KL	Group factor has a positive and significant effect on environmental sustainability. The active, competent and skillful group will increase environmental sustainability.	Groups in boarding school must improve their activeness, competency and skill for environmental sustainability.

<b>Relation between Variables</b>	<b>Implication</b>	<b>Suggestion</b>
FO->PS	Organization (group) factor has a negative and significant effect on human resource empowerment. It means that when organization is active, competent and skillful, it does not increase human resource empowerment. Too active, competent and skillful organization may create dependence by individual and group with all responsibilities incurred by organization.	Organization (group) can share activeness, competency and skill by delegating authorities, responsibilities, and decision-making to individual and group in balancing manner.
FO->KL	Organization factor is influential insignificantly to environmental sustainability. It means that there is a dependence of organization factor on individual factor and group factor for environmental sustainability. It is proved by the fact that individual factor and group factor are significantly influential to environmental sustainability.	It is suggested that organization (group) factor, represented by management, shall be more active, competent and skillful to improve environmental sustainability by not always depending on individual and group because both stakeholders are not permanently the member of boarding school organization.
PS->KL	Human resource empowerment is positively and significantly influential to environmental sustainability. Higher human resource empowerment is higher environmental sustainability for scabies disease eradication.	Human resource empowerment must be increased in terms of organization, individual and group to produce environmental sustainability freed from scabies disease.
<p>Conclusion: Human resource empowerment at Pondok Pesantren Tebuireng Jombang is a strong moderator variable to produce environmental sustainability freed from scabies disease. Organization factor can be directly influential, but insignificantly, to environmental sustainability. Organization factor, however, can be indirectly influential through human resource empowerment but also significantly influential to environmental sustainability freed from scabies disease.</p>		

## CONCLUSION

As shown by result of research and discussion, the conclusion of research is explained as follows:

1. Individual factor insignificantly influences human resource empowerment. Individual needs improving their welfare, access, participation and critical awareness on problem and decision-making.
2. Individual factor negatively influences environmental sustainability. If individual is more active, competent and skillful, environmental sustainability becomes low. The explanation behind this argument is that the engagement of individual to organization is usually very short because after graduate, individual does not commit their time and effort anymore for boarding school interest. Therefore, the responsibility for environmental sustainability is then incurred by boarding school.
3. Group factor is influential insignificantly to human resource empowerment. Groups in boarding school can be parent association, teacher team, learning group, management group, etc. Each group tries to improve their welfare, access, participation, and critical awareness of the problem and decision-making.
4. Group factor has a positive and significant effect on environmental sustainability. It means that the active, competent and skillful group will increase environmental sustainability.
5. Organization (group) factor has a negative and significant effect on human resource empowerment. When organization is becoming active, competent and skillful, it does not increase human resource empowerment. Too active, competent and skillful organization may only create dependence by individual and group with all responsibilities incurred by organization.
6. Organization factor is influential insignificantly to environmental sustainability. There is a dependence of organization on individual factor and group factor for environmental sustainability. It is proved by the fact that individual factor and group factor are significantly influential to environmental sustainability.
7. Human resource empowerment is positively and significantly influential to environmental sustainability. Higher human resource empowerment is higher environmental sustainability for scabies disease eradication.

8. Human resource empowerment at Pondok Pesantren Tebuireng Jombang is a strong moderator variable to produce environmental sustainability freed from scabies disease. Organization factor can be directly influential, but insignificantly, to environmental sustainability. Organization factor, however, can be indirectly influential through human resource empowerment but also significantly influential to environmental sustainability freed from scabies disease.

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