

INDIVIDUAL COMMUNITY CHARACTERIZATION RELATIONSHIP TO PARTICIPATION IN MANGROVE FOREST MANAGEMENT

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ABSTRACT. Mangrove forests have potential natural resources, so they can be managed and always used by the community. However, in reality, the condition of mangrove forests is currently very worrying and has been damaged, which is one of the consequences of human activities. This study aimed to determine the relationship between individual community characteristics and participation in mangrove forest management. The stages and methods carried out in this research are: determining the weights and scores of individual characteristics of the community and participation using a Likert scale with a questionnaire instrument and analyzing the relationship between individual characteristics of society on participation using rank spearman. The results showed that the community had been active in the utilization and management of mangrove forests. This can be seen in the condition of the individual characteristics of the community. People who are of productive age can carry out and carry out work and activities optimally. In addition, the level of community activity can be seen in 90% of respondents who have higher education in high school, which shows that in terms of mindset, absorption, and knowledge related to mangrove forests and their management are pretty good. Thus, statistically, the individual characteristics of the community do not show a significant relationship with community participation. Thus, changes in the community's individual characteristics will not change the pattern of community activities and activities in managing mangrove forests in Margasari Village.

Keywords: community characteristics; mangrove forest; community participation

HUBUNGAN KARAKTERISTIK INDIVIDU MASYARAKAT TERHADAP PARTISIPASI DALAM PENGELOLAAN HUTAN MANGROVE

ABSTRAK. Hutan mangrove memiliki potensi sumber daya alam, sehingga menjadikannya dapat dikelola dan selalu dimanfaatkan oleh masyarakat. Namun, pada kenyataannya, kondisi hutan mangrove saat ini sangat memperhatikan dan sudah mengalami kerusakan yang salah satu penyebabnya adalah aktivitas manusia. Tujuan penelitian ini adalah mengetahui hubungan karakteristik individu masyarakat terhadap partisipasi dalam pengelolaan hutan mangrove. Adapun tahapan dan metode yang dilakukan pada penelitian ini yaitu: penentuan bobot dan skor karakteristik individu masyarakat dan partisipasi menggunakan skala likert dengan instrumen kuesioner; dan analisis hubungan karakteristik individu masyarakat terhadap partisipasi menggunakan *rank spearman*. Hasil penelitian menunjukkan masyarakat telah aktif melakukan kegiatan pemanfaatan dan pengelolaan hutan mangrove. Hal ini dapat dilihat pada kondisi karakteristik individu masyarakat. Masyarakat yang berumur di usia produktif mampu menjalankan dan melaksanakan suatu pekerjaan dan kegiatan secara optimal. Selain itu, tingkat keaktifan masyarakat dapat dilihat pada 90% responden yang berpendidikan terakhir di jenjang sekolah menengah, yang menunjukkan secara pola pikir, daya serap, dan pengetahuan terkait hutan mangrove dan pengelolaannya sudah cukup baik. Dengan demikian, secara statistik, karakteristik individu masyarakat tidak menunjukkan adanya hubungan signifikan terhadap partisipasi masyarakat. Sehingga, perubahan-perubahan yang terjadi pada karakteristik individu masyarakat tidak akan mengubah pola aktivitas dan kegiatan masyarakat dalam pengelolaan hutan mangrove di Desa Margasari.

Kata kunci: hutan mangrove; karakteristik individu masyarakat; partisipasi masyarakat

INTRODUCTION

Mangrove forests are forest ecosystems that have unique characteristics and distinctive forest formations (Davinsy, Kustanti, & Hilmanto, 2015; Zhang et al., 2017). The community should utilize the uniqueness and potential of natural resources produced by mangrove forests to achieve sustainability goals and improve the welfare of communities in coastal areas. Three aspects must be considered in implementing the preservation and utilization of mangrove natural

resources, including social aspects, economic aspects, and ecological or environmental aspects (Diarto, Hendrarto, & Suryoko, 2012; Sangchumong, 2019). These three aspects must run and be carried out simultaneously, where these aspects will affect each other. For example, some of the functions of mangrove ecosystems based on economic aspects are as the primary source and producer of household needs and ecologically serve as protectors of the coast, preventing seawater intrusion and coastal biodiversity habitats (Safe'i, Ardiansyah, et al., 2021).

However, lately, a lot of environmental issues are being discussed. Among them is the condition of mangrove forests that are currently concerning and are in damaged condition (Utomo, Budiastuti, & Muryani, 2017). According to Safe'i, Latumahina, Dewi, & Ardiansyah, (2021), forests that can carry out their functions as stipulated are healthy forests. The main cause in this case is the rate of activity carried out by the manager and the community that exceeds the threshold or optimal limit of the environment. Therefore, the community's utilization patterns and activities are the primary keys to the cause of changes and damage to mangrove ecosystems. Damage to ecosystems in protected areas, especially mangrove forests, can impact environmental sustainability (Safe'i, Maulana, et al., 2022). The occurrence of land degradation is caused by human activities that clear land or mangrove forest areas that are allocated as ponds and excessive utilization and retrieval of mangrove forest resources without rehabilitation activities. In addition, utilization patterns that are not in line with the carrying capacity and are not environmentally friendly will threaten the sustainability of mangrove ecosystems (Gumilar, 2012; Zuhri & Tafsir, 2022). According to Utomo et al. (2017), the harvesting of timber products and the conversion of forests as pond land and plantation areas are part of development activities that have a dominant influence on the decline of mangrove areas in Indonesia. Thus, the primary key to the problem of fragmentation and degradation of mangrove land is the behavior and participation of communities around coastal areas (Ardiansyah & Safe'i, 2021). Therefore, there needs to be a formula for implementing mangrove forest management that leads to preservation and sustainability.

Participation can be interpreted as the involvement or participation of individuals or groups passively or actively in implementing decision-making and development projects (Pribadiningtyas, Said, & Rozikin, 2013). Community participation affects how sustainable the preservation of mangrove forests. Two types of participation can affect active participation, namely by inviting others or going down directly in carrying out activities carried out in mangrove forest areas and activities related to their management. In addition, there is also passive participation by not directly carrying out activities related to mangrove forest management (Mulyanie, 2016).

Participation carried out by the community can be related to several factors, one of which is the characterization of the community or the internal

factors. Internal factors can be interpreted as factors that depend on and affect the will and awareness of a person in carrying out an activity. Some variables that can be seen from the individual characteristics of the community are age, education, etc. Therefore, this study was conducted to determine the relationship between individual characteristics of the community to participate in mangrove forest management. This research is expected to provide information and data for stakeholders and managers in formulating policies on the sustainable management of mangrove forests.

METHOD

This research was conducted in the Mangrove Forest of Margasari Village, Labuhan Maringgai District, East Lampung Regency. The research method used is the case study method, which is based on the social conditions of the people around mangrove forests (Gumilar, 2018). This research method uses quantitative data obtained based on interviews using questionnaire instruments. Inter-views were conducted with respondents, namely community groups managing mangrove forest areas. Interviews are conducted to collect data related to internal conditions and the level of community participation.

This research was carried out in communities that manage and depend on mangrove forests. The community is in the form of community groups in Margasari Village. The data used in this study is based on primary and secondary data. Primary data is obtained based on direct observation and interviews with respondents. Meanwhile, secondary data is obtained by conducting literature studies to complement and support the research results. According to Cesario, Yuwono, & Qurniati, (2015); and Syahiib, (2021), there are 154 populations of community groups in Margasari Village, consisting of 20 members of the Margajaya group, 24 members of the Environmental Education group, 20 members of fishers, 80 members of the farmer group, five members of the terasi processing group, and five members of the fish processing group. The number of respondents can be determined using the Slovin formula. This slovin formula is determined when the number of observation populations is as many as 100 people (Jogiyanto, 2013; Yuniarti, Putri, Sudibyo, & Rafinda, 2019).

Thus, the number of respondents using the Slovin formula, with a standard error of 15% and a population (N) of 154, is as follows:

n = Number of respondents (sample)
N = Population size
e = Error value (15%)

The parameters measured on the community participation indicator are individual characteristic variables or community participation rates based on management stages. Characterization variables support and support the basis of how the individual characteristics of the community towards activity or participation. Variable characteristic factors include age, education level, and length of residence. Each of these variables is carried out with measurements and weighting on each parameter to get a score value from the individual characteristics of the community. Measurement and weighting of individual characteristic values can be seen in Table 1.

Table 1. Internal variable score weighting

Number	Variable	Measurement Parameter Score	Information
1	Age	(1) < 30 year	Low
		(2) 30-50 year	Moderate
		(3) > 50 year	High
2	Education Level	(1) < 6 year	Low
		(2) 6-9 year	Moderate
		(3) >9 year	High
3	Long Stay	(1) < 20 year	Low
		(2) 20-40 year	Moderate
		(3) >40 year	High

(Source: Nurhalimah, 2018)

Then, the Likert scale method was used to measure the level of community participation in mangrove forest management. The instrument used by the public to get a participation score uses a questionnaire where there are several statements arranged in such a way that they can be answered with three choices of answers, namely often (score 3), rarely (2), and never (1). The questions asked are a measure to get a total participation rate score arranged based on observation variables, in this case, namely mangrove forest management variables based on management stages. The management variable includes planning stages, implementation stages, stages, utilization, and evaluation stages. So, some questions include these variables to measure the level of community participation based on degrees/intensity in various mangrove forest area management activities for ecosystem preservation. The score interval of the community participation

rate is divided into three categories, namely low participation rate, moderate participation rate, and high participation rate. The score interval value can be seen in Table 2.

Table 2. Participation rate score interval

No	Category	Score Interval
1	Low	07-11
2	Moderate	12-16
3	High	17-21

(Source: Primary data, field data)

An analysis was conducted to determine the relationship between the two variables after obtaining the values of the individual characteristic variable score of the community and the community participation level score. The data analysis method used in this study is the spearman rank analysis method. This analysis is used to determine the relationship between variable characteristics of individual people (X) and variable participation rates based on the stages of management (Y). This statistical test was conducted with significant numbers or confidence levels of 95% and 99% ($\text{sig} < \alpha$, $\alpha = 0.05$ and $\alpha = 0.01$) (Katmini & Syakur, 2020; Su & Li, 2021). According to Thirumalai, Chandhini, & Vaishnavi, (2017), the spearman rank formula that can be used is as follows:

$$rs = 1 - \frac{6\sum D^2}{n(n^2 - 1)}$$

rs = Spearman Rank correlation coefficient

D = Difference between Rank Spearman

n = Number of Spearman Rank pairs

The correlation coefficient value is used to see how closely the relationship between observed variables is. The measuring values for determining relationship categories can be seen in Table 3.

Table 3. Relationship Strength Guidelines

Correlation Coefficient	The Power of Relationships
0.000 – 0.199	Very Low/Weak Correlation
0.200 – 0.399	Low Correlation
0.400 – 0.599	Moderate Correlation
0.600 – 0.799	Strong Correlation
0.800 – 1.000	Very Strong Correlation

(Source: Thirumalai, 2017)

Thus, to find out the significance of the relationship can be indicated by:

- If the value of $\text{sig} < 0.01$ or $\text{sig} < 0.05$, then H_0 is rejected and H_1 is accepted, which means that there is a relationship between the variables of the individual characteristics of a community and the level of community participation.

- b. If the value of $\text{sig.} > 0.01$ or $\text{sig.} > 0.05$, then H_0 is accepted, and H_1 is rejected, which means there is no relationship between the variable characteristics of the individual community and a the level of community participation.

RESULTS AND DISCUSSION

The Characteristics and Distribution of Respondents

Mangrove forests are forest ecosystems that have unique characteristics and distinctive benefits. Mangrove forests have functions in economic, social, and ecological aspects. In the Margasari Village area, most of the area is overgrown and dominated by mangrove forests. Many surrounding communities carry out management and utilization activities in mangrove forest areas. Several community groups manage Margasari mangrove forests. Respondents to this study referred to community groups that organize and depend on the mangrove forests of Margasari villages. Thirty-five respondents were divided into four community groups, including 12 members of KTH Lestari Indah, ten members of KTH Hijau Desaku, ten members of Karang Taruna, and three members of Tambak Group. Some of these groups actively participate in mangrove forest management. Community participation activities can be influenced by several factors, one of which is the individual characteristics of the community.

The individual characteristics of a community are factors that grow and develop on the self-awareness of the community itself. The community has an important role in implementing sustainable development, including the sustainable management of mangrove forests. However, this goes back to the factors that affect community in its implementation. Thus, one of the success factors in mangrove forest management is the community. The individual characteristics of a community consist of age, level of education, and length of stay.

Age

One of the factors that affect the activities and work of the community is age. Age or age factors can affect other factors and community work productivity (Ali, 2019; Herawati, 2013). The productive age range for carrying out forest management activities ranges from 15 to 65 years (Maier & Winkel, 2017; Nurdina, Kustanti, & Hilmanto, 2015). The distribution of the age of the mangrove forest management community of Margasari Village can be seen in Table 4.

Table 4. Age distribution

Age (Year)	Number of Respondents	Percentage (%)
<30	3	8.57
30-50	25	71.43
>50	7	20
Sum	35	100

(Source: Primary data, field data)

Based on the table above, most people are aged between 30 and 50 years. This indicates that members of community groups are of productive age to do work. This is by data from the Central Statistics Agency (BPS) (2021), which states that the productive age of the community is in the age range of 15-64 years. Age can influence a person in the decision-making process. Age can also be a measure of the success of forest management activities. Farmers with a productive age will usually work better and more optimally than those of unproductive age (Adalina & Sawitri, 2021). Therefore, the age factor indicates that the older the community, the more it will tend to increase the work productivity of the community. This shows that it does not mean that people who have aged beyond the product range cannot affect the implementation of forest management. However, the productive age range will indicate the optimization provided by the community in doing the work. So, in the implementation of managers, productive age can determine whether the implementation of management in the mangrove forests of the Margasari Village is carried out correctly.

Level of Education

Education level is another factor that can affect community participation. The level of education and age go hand in hand and are related to each other. Age or age factors and knowledge factors will affect the productivity of a person's (Ali, 2019; Herawati, 2013). According to Alfandi, Qurniati, & Febryano, (2019), the level of education can affect people's perception and participation. This level of education leads to the ability and absorption of knowledge owned by the community based on the last level of education taken. The distribution of the level of education of the managing community in Margasari Village can be seen in Table 5.

Table 5. Distribution of education levels

Education Level (year)	Number of Respondents	Percentage (%)
<6	2	5.71
6-9	16	45.71
>9	17	48.57
Age	35	100

(Source: Primary data, field data)

Based on the results of research in Table 4 shows that the last education taken by the community is at the Junior High School (SMP) level for as many as 16 people (45.71%) and the Senior High School level (SMA) for as many as 17 people (48.57%). This shows that the people in Margasari Village have paid great attention to education which can be seen by almost 90% of respondents who have taken their level of education up to the secondary school level. Although, according to Hermawan & Hutagalung, (2021), the high level of education can affect participation, the low level of community education is a factor that hinders the desire and capacity of the community to participate and implement mangrove forest management plans, and vice versa. In addition, according to Salampessy, Febryano, Martin, Siahaya, & Papilaya, (2015); and Sidiq, Sofro, Sulistyani, & Achmad, (2022), people can apply traditional ecological knowledge and local wisdom and then form an institution that aims to preserve mangrove forests. Therefore, to maintain and improve public knowledge, development efforts are needed in the educational aspect. Furthermore, educational development is very important in building people's skills, especially in the 21st century, especially in improving soft skills, namely creativity, innovation, communication skills, and decision-making (Herdiyanti & Akbar, 2020).

Length of Stay

Another characteristic that can affect participation is the length of residence. The length of residence in question is how long the community lives in the research area or around the mangrove forest of Maragasari Village. This factor can be related to the community's awareness of mangrove forests. The old distribution of people's settlements can be seen in Table 6.

Table 6. Length of Stay distribution

Length of Stay (Year)	Number of Respondents	Percentage (%)
<20	12	34.29
20-40	21	60.00
>40	2	5.71
Sum	35	100

Source: Primary data, field data)

Based on the research results in Table 6, most people have lived in Margasari Village for a maximum of 40 years. A total of 12 respondents have lived for 20 years, and as many as 21 respondents have lived for 40 years. Therefore, it can be interpreted that more than 50% of respondents are indigenous people who have lived from those born

in Margasari Village. According to (Kristin, Qurniati, & Kaskoyo, 2018; Wijaksono, 2013), the longer a person lives and settles in an area, it will positively impact the environment so that awareness grows in maintaining and managing mangrove forests. The longer the community stays, the diversity of types of mangrove forest vegetation will be more diverse (Anatika, Kaskoyo, Febryano, & Banuwa, 2019; Safe'i, Arwanda, Doria, & Taskirawati, 2021). The old factor of habitation will be related to the physical dimension and energy.

Communities that have lived for a long time will have the potential for the development of mangrove debt ecotourism objects. In this case, forms of participation contributions that can be given are the preparation of tourist destinations, as a tour guide, or as a provider of infrastructure equipment support in tourist destination activities (Harto, Sidiq, & Karneli, 2021).

The Community Participation Rate

Determination of the level of community participation is based on variable management stages, namely the planning stage, implementation stage, utilization stage, maintenance and evaluation stage. The implementation of this stage affects the success of the Community-Based Forest Management (PHBM) program in mangrove forest management in Margasari Village. The essence of this program's success is how the community's participation or involvement in the implementation of forest area management (Tanjung, Sadono, & Wibowo, 2017). So that the conservation, economic, education, and tourism functions can be developed, the community participation obtained in this study can be seen in Table 7.

Table 7. Participation rate based on management stages

Management Stages	Number of Respondents			Sum	Category
	Low	Moderate	High		
Planning	5	11	19	35	High
Implementation	2	9	24	35	High
Utilization	1	19	15	35	Moderate
Maintenance and Evaluation	4	15	16	35	High

(Source: Primary data, field data)

Table 7 shows that the level of community participation can be seen from each variable. At the planning stage of the category, the level of community participation is high, with 19 respondents. The planning stage can be interpreted as the composition of the policy framework for the use of resources and development activities that will be carried out in a particular zone. At this stage, it is related to how

much intensity or community involvement is in carrying out program preparation activities to carry out management activities in the mangrove forests of Margasari Village. This stage of planning becomes an attraction to people's assumptions and views, so it will encourage policy and project activities to respond to reality and adjust to the social and economic conditions of the community (Buchy & Hoverman, 2000). Thus, various project plans and activities, such as improving ecological-based tourist areas, can be carried out optimally (Febryano et al., 2021). The preparation of the correct plan will lead to the implementation of a program that is good and optimal. Mangrove land use has a negative impact, such as the existence of pond land, so there needs to be planning to disrupt this, one of which is the development of ecotourism areas. Ecotourism has great potential for protecting mangroves and their biodiversity and empowering local communities (Abidin, Setiawan, Muhaimin, & Shinta, 2021; Febryano, Salampessy, Ichsan, Asmarahman, & Riba'i, 2014).

The implementation stage can be interpreted as a follow-up to the implementation of planning that has been designed for mangrove forest management activities. The implementation of Good Forest Governance of mangrove forest management seeks to optimize the management community to manage mangrove forests, utilize, and maintain the sustainability of Margasari village mangrove forests. So, we can know how the level of community participation based on the stages of implementation. According to Farida, Setiawan, & Esra, (2020), participation is one way to increase the motivation of the community, whose characteristics can be seen in its implementation. Table 7 shows that community participation is already high based on the stages of implementation. The community began to carry out mangrove planting activities periodically so that currently, the condition of mangrove forest vegetation is quite good, and the local community carries out the management (Maulana, Safe'i, & Febryano, 2021). The planting activity in question is carried out at a specific time interval depending on the condition of the mangrove vegetation stands in the area; for example, in the first year, mangrove seedlings are planted, then about 3-5 years later, reforestation or planting is carried out in critical locations or on dead individuals. This shows that the community is already aware of the importance of preserving mangrove forests in Margasari Village. Margasari Village mangrove forest as a protected forest has a role in protecting life support systems that are beneficial to the community as sustainable forest management. Implementing good mangrove

forest area management will lead to the utilization of forest products.

The utilization of forest products is a form of interaction between communities in terms of forest utilization which generally aims to meet the economic needs of families and be traded (Kristin et al., 2018). The level of community participation at the utilization stage can be measured by looking at the number of utilizations and results received or obtained by the mangrove forest community of Margasari Village. Table 7 shows that participation at the utilization stage is still relatively low. This is in contrast to the results of Salampessy, Febryano, & Ichsan, (2021), showing that almost 60% of coastal communities know the importance of the role of mangrove forests as a source of food and beverage production and ecologically as a barrier to coastal abrasion. Good community knowledge can be supported by government programs that aim to improve the community's economy and provide knowledge and activities related to forest rehabilitation and the elimination of natural disasters. It can be concluded that the people of Margasari Village still do not have enough knowledge and skills to utilize mangrove forest products. In fact, according to Farida et al. (2020), good management can be seen in utilizing resources that are carried out efficiently and effectively to achieve optimally expected goals while still paying attention to ecological conditions and resource stocks. Optimization of mangrove forest products has a positive impact on the community. However, if the use of forest products is not controlled and carried out continuously without regard to ecological conditions, it will directly have a negative impact on the sustainability and preservation of mangrove forests.

The maintenance and evaluation stage is the final stage in managing mangrove forests. At this stage, it is measured based on the frequency and activeness of the community related to supervision, maintenance, and meeting activities during evaluation activities. The evaluation must be carried out immediately after completing a series of management activities (Setiawan, Febryano, & Bintoro, 2018). This makes it a step in the process of improving the program plan and the project that will be carried out next. Table 7 shows that participation at the evaluation level is in a high category, with 16 respondents. There was no significant difference between respondents in the high and moderate categories. This stage is a stage that assesses and provides improvements to the activities carried out for the decision-making process in future activities. Several factors contribute positively to the maintenance and evaluation stages,

namely the condition of mangrove forest areas, support for laws and regulations, implementation of government policies, and support and role of communities, NGOs, and universities (Rianto & Djanat, 2019; Wijayanti, 2007). Sustainable forests will lead to healthy forest conditions. So that it will provide benefits for local communities in economic aspects such as increasing income and ecologically, environmental improvement (Rochmah, Safe'i, Bintoro, Kaskoyo, & Rahmat, 2021). This will also have an impact on the level of community welfare, the better the condition of mangrove forests, the better the welfare condition of the community (Safe'i, Darmawan, et al., 2022).

Local institutions have an important role in mangrove forest management. When the community takes an active role, the initiative and participation of the community can encourage, mobilize, and organize these institutions to carry out sustainable mangrove forest management actions (Febryano, Suhajito, Darusman, Kusmana, & Hidayat, 2014; Kongkeaw, Kittitornkool, Vandergeest, & Kittiwatanawong, 2019). Similarly, according to Febryano, Suhajito, Darusman, Kusmana, & Hidayat, (2015); and Nyangoko, Berg, Mangora, Gullström, & Shalli, (2020), some coastal communities have supported and recognized the existence of mangrove forests managed based on existing rules and institutions. Not only based on perception, but also the active participation of the community in the management of mangrove forests must be strengthened by social relations and access to social identity.

The Characteristic Relationship of an Individual Community to Participation

One of the factors that can affect community participation in management activities is internal factors or characteristic variables. This factor consists of several variables, namely age, level of education, and length of residence. In addition, individual characteristics of the community affect management activities based on self-awareness and will. Therefore, the success of management activities can be determined by the characteristic conditions of the managing community. The results of the

analysis of the relationship between the individual characteristics of a community and the level of community participation in management activities can be seen in Table 8.

Based on Table 8 shows that of the individual characteristic variables of community, no relationship occurs to the variables of community participation. The correlation test results showed that no significant relationship occurred between the observational variables. This can be seen in the Sig value, with a confidence level of 99% and 95% below the standard error values of 0.01 and 0.05. Similarly, the correlation coefficient shows no close relationship between the variable characteristics of the individual characteristics of a community and the level of community participation. The correlation coefficients in the range of 0.76-0.99 (strong correlation) indicate a strong/solid relationship in each variable/indicator (Puspita, Safe'i, & Kaskoyo, 2021).

The results in Table 8 align with the research of Salampessy, Nugroho, & Purnomo, (2012), which shows no significant relationship between age, education level, and length of stay on the level of community participation. Lack of supporting variables to see the relationship between these variables. For example, the knowledge variable can be seen from the community towards participation. This can be in the form of the level and how of extension activities and various understanding concepts related to the benefits, functions, and roles of mangrove forests from multiple stakeholders. Understanding the potential of local knowledge, their understanding of the forest, from whom it is obtained and knowing how to access it is an important task as a catalyst in participation (Salampessy et al., 2012). The presence of high relationship strength indicates that the interrelationship between changes occurs in observational variables. Thus, based on the results of the study (Table 8). Changes or dynamics that occur in the variables of individual characteristics of the community (age, level of education, and length of residence) will not be related to the pattern of activities and activities (participation) of the community in the

Table 8. Analysis of the relationship of individual characteristics of community to participation

Managements Stage Characteristic	Planning		Implementation		Utilization		Maintenance and Evaluation	
	Correlation Coefficient	Sig	Correlation Coefficient	Sig	Correlation Coefficient	Sig	Correlation Coefficient	Sig
Age	0.114	0.514	0.113	0.445	-0.163	0.350	-0.141	0.419
Level of Education	-0.008	0.965	0.192	0.270	0.010	0.955	0.181	0.297
Length of Stay	-0.121	0.488	0.001	0.996	-0.001	0.998	-0.265	0.123

(Source: Primary data, field data)

implementation of mangrove forest management margasari village.

CONCLUSION

The level of community participation can be influenced by several factors: internal factors or variable characteristics of individuals in a community. The individual characteristics of a community consist of age, level of education, and length of residence. People who carry out management activities tend to have a productive age range of 30-50 years with the last level of education obtained, namely the high school level. Supported by the long-standing intensity of community habitation, these variables have supported the community in implementing management activities. Productive age can support optimal management activities, and a high level of education can increase the absorption and knowledge of the community. Based on the management stage, the community participates in a series of activities from the planning stage to the evaluation stage. This can be seen in the intensity of the community following the work program preparation meeting, nursery activities, treatment activities, and post-activity evaluation meetings. There is no significant relationship between the individual characteristics of a community and the stages of management. Thus, the changes and dynamics that occur in the individual characteristics of the community will not have an impact on community activities and activities in mangrove forest management.

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