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To cite this article: L A Rudwiarti and V R Vitasurya 2020 *IOP Conf. Ser.: Earth Environ. Sci.* **452** 012077

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# Contributing social safety and security for elderly-friendly environment (case study of Brayut Tourism Village, Yogyakarta, Indonesia)

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**Abstract.** Social safety and security are vital in everyday life of elderly hood, as its aging process sometimes make them difficult to be independent. The elderly-friendly environment is significant to support their independent daily activities and behaviors. This paper aims to contribute to the concept of a friendly urban environment for elderly people. It explores how elderly people perceive their surrounding social environment, how the social life is conducive enough to motivate their survival to live, and how the physical environment should be set up to contribute social safety and security. The data gathering used depth interviews and behavior setting methods to obtain the elderly's perceptions and inspiration. The elderly's perceptions of the social environment supporting safety and security used JMP 7 software analysis program to get an appropriate formula for setting up friendlier environments. The initial results show that during the aging process, elderly people need prosthetic facilities to care for their continuation of life and to strengthen their motivation to be independent. This intended friendly environment psychologically will imply to their social network.

Keywords: social safety and security, elderly-friendly environment, environmental perception.

## 1. Introduction

This paper presents how elderly people in Brayut Tourism Village perceive and consume the village environment in association with their needs for the supportive environment both physically and socially to continue the tourism village lives. It prepares first the nature of elderly people and the concept of environmental perception. Then, it continues with elderly people in social safety and security context. It will be followed by a discussion of the study results. Finally, it will conclude how social safety and security can support a friendly environment for elderly people in Brayut Tourism Village.

Brayut Village was established as Tourism Village in August 1999. It is administratively located about 10 kilometers in the north of Yogyakarta City in the district of Pandawaharja, Sleman Regency, Yogyakarta Special Province, Indonesia. Brayut is one of the traditional tourist villages which is primarily based on its local tradition, nature, and sociocultural attractions.

### 1.1. The nature of elderly people

Elderly people are conceptualized both biologically and psychologically. Social attitudes toward elderly had changed in response to the different historical relic and cultural traditions in various societies. Wilson notes that the elderly can be socially defined as a time of fulfillment, or as a time of degeneration and weakening [1]. The more knowledge and awareness of what it is like to grow old, the more it will



encourage people to question attitudes to the elderly and the type of care they need. In the book titled *Old Age, Constructions and Deconstructions*, Hazan accentuates that human experience is shaped by human constructs through a very complex set of sociocultural environments to perceive values, situations, and norms [2]. The elderly people, however, have a lifetime of various rich experiences and cultural skills compared to other generations.

Those who are called 'elderly', show a great diversity of physical and mental abilities, preferences, and lifestyle [3]. Factually, after the age of 60, if not before, there is an associated decline in many areas of cognitive performance, particularly those involving speed on information processing, transmission and retrieval [4]. On the purpose of classifying different abilities and types of activities, Carstens conceptualized three different but overlapping groups of elderly people [5], i.e.,

- young old, those who are still active, independent and mobile, self-initiated in some types of activities;
- old, those who have the ability for semi-independence and semi-mobility, self and group initiated and sometimes need some assistance with the activities of daily life;
- old-old, those who may require a greater level of assistance, are dependent and have very limited mobility. They tend to be more passive in some activities

During the natural life cycle, it seems that the elderly phase is perceived as a perspective boundary between life and death. So that in this stage, elderly people try to defend against approaching death, while they have often to experience a challenging independent living due to the decline of physical and mental ability.

In the Indonesian context, people who are over 60 years old, or who are approaching the age of 60 with any difficulty in daily living due to the aging process, are considered as the elderly people [6] and [7]. Whilst, The Department of Health of The Republic of Indonesia classifies the elderly into four categories, i.e. (a) pre-old (45 – 54 years), those who are still look strong both physically and psychologically, (b) young-old (55 – 64 years), (c) general-old (65-69 years), and (d) old-old, those who have high risk (over 70 years) [8]. Elderly people perform several roles and potentials to contribute to social life. This contribution associated with their rich skills and experiences. However, they sometimes also have to face difficulties in their daily life in accordance with their deterioration of physical and mental abilities. Such inconveniencies will differ, depending upon the historical background whether individual, within the family and social lives. Based on this condition, the support from surrounding social lives is significant to make sure that they feel safe and secure. The elderly's perception of the surrounding social environment is necessary.

### *1.2. Environmental perception*

Perception can be achieved by several sensations [9],[10] then the process of environmental perception is interpreted as a process of getting information from the surrounding environment through various or combined sense modalities [11], [12],[13]. Environmental perception tries to find the impressions of settings and places, the interrelationships between the built environment and users and establishing an aspect of everyday experience [12]. Perceiving physical built environment is a complex process involving the interaction of human physiology, development, experience, and cultural sets and values with outside stimuli [14]. Hence, the process of reactions will be influenced by the first sense such as visual, auditory, tactile, that people receive from the stimuli [11], [15], [16]. The perceptual process relates to human senses and is always influenced by psychological aspects such as emotion, awareness, and attitude. Cassidy defines environmental psychology as 'the study of the transactions between individuals and their socio-physical environments' (p.4). He also offered another definition, i.e. 'the application of psychological knowledge and method to understanding the process and implications of the human-environment transaction and applying the insight attained to improving the quality of the experience' (p.240) [17]. People-environment relations will also include the subjective experience of

environments which connotes action or behavior within the environment [13]. Within that, the socio-cultural paradigm of person-environment relations is also substantive [18]

The environmental perception process relies on the environmental knowledge of the individual who experiences in it. Environmental knowledge is acquired by interacting with, or experiencing, different environments. A particular daily living environment may also be perceived as having specific implication values of the community. Furthermore, Gustafson indicates that a place is not only a physical environment but also as a symbolic, historical, institutional and geographical environment [19]. Since the residential living environment is also a part of everyday life, it will set in place whatever cues of the social system through the cognitive process, and will also facilitate the mutual interaction between individuals and their everyday environment. In the case of an elderly people-environment transaction, the cognitive ability will also be affected by their personal changes through the aging process. The principle explanation of the cognitive aging theory, that cognition refers to the efficiency and effectiveness of processing at that time of assessment, and is typically evaluated with tasks of learning, memory, reasoning, and spatial abilities [20]. It seems that is not only an accumulation of past experience but is also affected by present experience and functional knowledge. Based on that, legible information of the physical environment and the socio-cultural circumstance is therefore very important for the elderly to construct mental imagery of their surrounding environment, in order to decide or to modify the actions.

### *1.3. Social safety and security for the elderly*

This study investigates how elderly people in Brayut play the roles in the continuation of its social life. Brayut Village is considered as one of the traditional tourism villages in Yogyakarta. The continuation of tourism activities depends on the traditional tourist attractions and socio-cultural circumstance supporting the village. The previous study indicated that social aspects such as family trust, social trust, harmony in social community life, very much influence the older generation to feel settled in daily lives [21]. In addition, cultural aspects like respect to an elder ancestor, the family inherited system, and Javanese attitude and world views, are also psychologically very significant in supporting their continuation of lives. It can also be assumed in terms of social safety and security within the environment. Merriam Webster dictionary defines safety as [22]:

- the condition of being safe from undergoing or causing hurt, injury, or loss
- a device (as on a weapon or a machine) designed to prevent inadvertent or hazardous operation

Security is:

- the quality or state of being secure
- something given, deposited, or pledged to make certain the fulfillment of an obligation
- an instrument of investment in the form of a document (such as a stock certificate or bond) providing evidence of its ownership
- something that secures: protection

Safety is a broad concept that can include concerns about accidental injuries, threats to health, natural disasters and so on, fears and anxieties about crime are profound influences on how safe people feel in their home and immediate surroundings. Such fears include worries about becoming a victim of crime, perceptions of the risk of victimization and subjective judgments about the safety of the streets. They can also result in precautionary behaviors such as avoiding certain situations because of their concerns about personal safety [23].

Another study by Choras provided an application of emerging security and safety applications of Online Social Networks (OSNs) [24]. Due to high worldwide popular social networking can be considered not only as an effective communication channel and efficient information sharing platform, but also as a useful mechanism to enhance public safety and security, including crisis response and recovery efforts, urban operations, homeland security, and mass events planning. Therefore, in the paper, they present real examples of how OSNs can be used for those purposes. They concluded by

proposing a correlation framework that can effectively increase the capabilities of OSN data management and processing for public safety.

#### *1.4. Friendly environment*

The correlation between elderly people and the surrounding built environment provides basic concepts of how elderly people experience certain ways of life throughout the aging process. It is essential to take into consideration their experiences in order to build up some improvements to meet the need for a supportive environment for elderly people. Sensory stimulation of the environment plays a significant role in motivating as well as guiding behavior. People perceive the visual world and respond to it through sensory mechanisms. It is necessary to modify the stimuli of physical elements of the environment to offer comprehensible spatial orientation. Likewise, it is also necessary to consider the physical and sociocultural aspects of the environment, in order to manipulate the stimuli to support its friendliness. The capacity of social and community services such as regular health check service, public places for socializing and meeting others, social gathering activities, social surveillance to take care of the elderly, are needed to cater for their safety and security. Similarly, physical safety of risk accident is also necessary to guarantee their independent mobility. The approach of prosthetic environments, which offers challenges and supports, are needed and should be developed in which compensation could be made for the changing abilities of the elderly people during the aging process.

Koh et.al, in their study in Singapore, used a set of pre-defined descriptions related to elderly mobility [25]. The elderly were asked to state the level of mobility-related to fall accident experience. These descriptions in increasing severity order are high independent, high independent with walking aid, medium require caregiver, low require a wheelchair, low require wheelchair plus caregiver. This study suggests an elderly who suffered a fall is associated with a decrease in mobility level when compared to another who had not suffered from an accident. It is of great importance that an elderly-friendly environment can be built such that physical accident is reduced or prevented. The majority of the elderly in Singapore are self-conscious in avoiding falls. However, it could raise their awareness of the availability and use of infrastructural supporting facilities rather than choosing to be overly self-reliant. The service of Community Centers and support groups such as the Singapore Road Safety Council and Singapore Action Group of Elders, the elderly awareness on road safety including environmental risks and use of infrastructural supporting facilities could be encouraged through campaigns and fun lessons. A comprehensive understanding and critical theories of the nature of elderly people in terms of the decline of abilities associated with the aging process, their changing preferences and adaptability, and their needs of supportive physical and sociocultural environments for their independent living, will be very useful to consider in order to improve ideas on caring capacities of a friendlier environment for the elderly. Based on that, certain research methods for the investigation were selectively referred to and applied in Brayut Tourism Village case study.

## **2. Method**

The purpose of this study is to investigate the way elderly people consume the environment in Brayut Tourism Village. Firstly to identify the elderly people that can be determined as respondents. Secondly, to obtain information on how social safety and security play the roles in supporting the older generation to construct more friendly public places. Thirdly, to analyze what social aspects that influence the will and motivation of the elderly people to be active in those friendly environments using the software program of Jump (JMP).

The investigation used purposive sampling technique to select the elderly to be interviewed based on a variety of old age classifications. Different types of places were selected to be physically observed in order to characterize the traditional concept of public places. After that, in order to examine its physical setting, direct observation was applied. This is for the purpose of deeply seeking out a friendly environment for the elderly people in Brayut Village. The next stage was to gain any information from the respondents about whatever ideas and inspirations to enhance the environment to support their safety and security. It utilized the depth interview technique for elderly people to gain self-motivation or

inspiration to make the environment safer and more secure. After verified by the respondent, the result of the interviews classified by content analysis method to get the keyword and categorization of the respondent perception. The content analysis enables the researcher to get the valid answer for the research question related to the context, especially for what they mean and to whom also to mediate antecedent and consequent condition [26]. Then, it was followed by coding. Content analysis of the data resulted from the respondent is an important step for correlation analysis using Jump (JMP) software in the next step in the quantitative approach. After analyzed with JMP software, the preference of the elderly to do activities was interpreted by a qualitative approach using the term of social safety and security criteria. To gain information from elderly respondents, some open questions were used, i.e:

- Respondent identification, to collect the personal identity of the respondents related to their activity such as family background, gender, age, occupation before being elderly.
- Elderly activities, to collect all kind of elderly activities and the motivation/ reason to do it.
- Places for activities, to look at all kind of spaces and places chosen by the elderly to do their activities, preference to do the activities in that place and how the safety – security criteria affect the elderly to prefer doing there.

It also explored what roles of the elderly can contribute to maintaining the traditional sphere of the tourism village. This depth interview was also purposed to obtain deeper facts of delivering socio-cultural values to support a friendly environment that can accommodate their daily activities. The analysis of data used family kinship in which sociocultural principles were inherited, in order to see the continuation and the sustainability of Brayut tourism village.

### 3. Findings and discussions

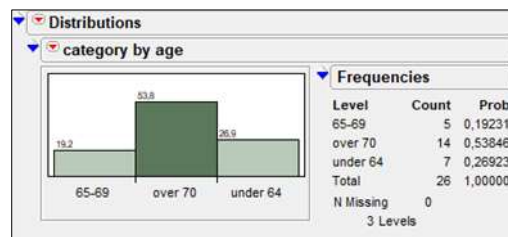
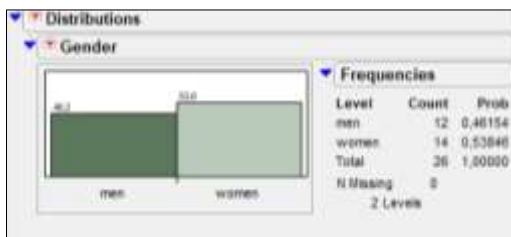
It cannot be denied that all human beings have to face physical and emotional changes in their health as they grow older. The approaches in which they experience age and the process of aging varies in different social, economic, and cultural circumstances. Nowadays, advances in medicine, technology, and education, and a good dietary habit lead to people living longer. Survey result of BPS (Statistical Centre Bureau) showed that life expectancy in Yogyakarta Special Province is high compared to all provinces in Indonesia. It is 72 year for men and 76 year for women [27]. Within Yogyakarta Special Province itself, Sleman Regency where Brayut Village takes place is considered the highest. Table 1 below provides the elderly respondents in Brayut Tourism Village that still do daily activities for the continuation of the village lives.

**Table 1.** Elderly respondents in Brayut Village (Source: Research data, 2018)

No	Respondent	Category by age	Gender
1	Mrs. Jimah	over 70	woman
2	Mr. Suratman	over 70	man
3	Mr. Sukarman	under 64	man
4	Mrs. Suhandiyo	65 - 69	woman
5	Mrs. Endang	65-69	woman
6	Mrs. Tris	over 70	woman
7	Mrs. Arini	over 70	woman
8	Mrs. Wantini	under 64	woman
9	Mr. Kadaryoko	over 70	man
10	Mr. Suyitno	over 70	man
11	Mr. Joni	under 64	man
12	Mrs. Sunardi	65 - 69	woman
13	Mr. Mujiman	over 70	man

14	Mrs. Mujiman	65 -69	woman
15	Mr. Mugiwiarto	under 64	man
16	Mr. Rinto	under 64	man
17	Mr. Sugito	under 64	man
18	Mrs. Samiyem	over 70	woman
19	Mrs. Arjo Utomo	over 70	woman
20	Mrs. Yanti	under 64	woman
21	Mr. Mujiharjo	over 70	man
22	Mrs. Mujiharjo	over 70	woman
23	Mr. Karsowiyono	over 70	man
24	Mrs. Karsowiyono	over 70	woman
25	Mr. Sugiono	over 70	man
26	Mrs. Yustina Sutinah	65 - 69	woman

All respondents were categorized into two classifications, i.e by gender and by age. The distribution of respondents is shown in the graph on figure 1 and 2 below :

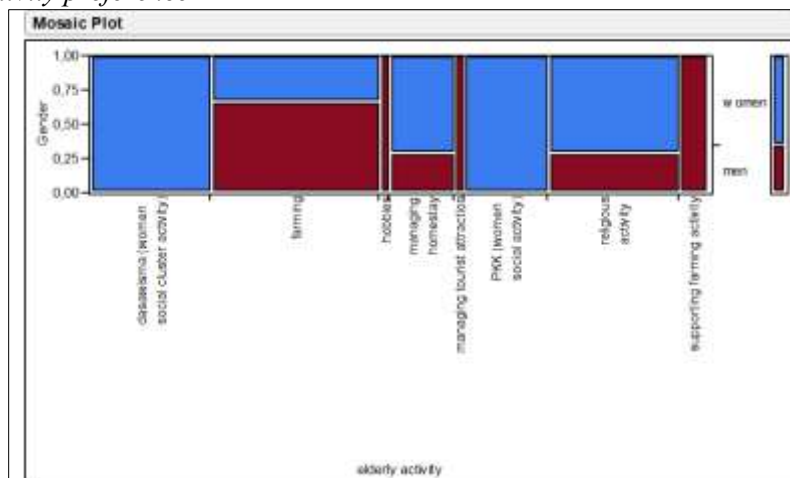


**Figure 1.** Distribution of respondents by gender: 53.8 % women and 46.2 % men.

**Figure 2.** Distribution of respondents by age, under 64: 26.9 %, 65-69: 19.2 % and over 70: 53.8 %.

The next part elaborates the initial findings from the multivariate analysis using the program of Jump (JMP)

### 3.1. Elderly's activity preference



**Figure 3.** Preference for elderly activities by gender.

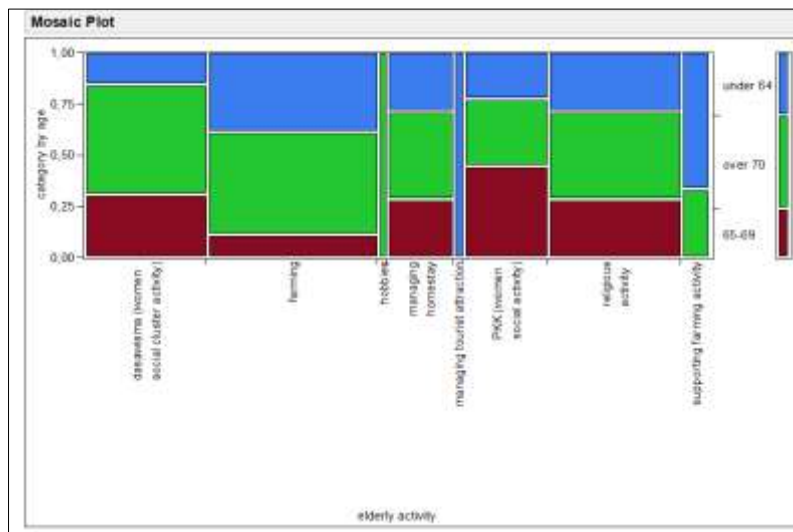


Figure 4. Preference for elderly activities by age.

The preference of elderly activities based on interviews data can be summarized as seen from the graph on figure 3 and 4 above as follows:

- The distribution of elderly activities VS gender shows that women elderly mostly do *dasawisma* (small group of women), *PKK* (women group of the social neighborhood), religious activity, and managing own homestay. While men elderly prefer to do farming, doing hobbies, and managing tourist activity.
- The distribution of elderly activities VS category by age, shows that elderly under 64-year-old, mostly do activities of managing tourist attraction and supporting farming activity, whereas elderly in 65-69 year old mostly do *PKK* and *dasawisma* (social activity), and elderly over 70, mostly do hobbies, farming, religious activity, managing homestay.

Those elderly activities are classified into 3 types: (1) social activity, (2) cultural activity and (3) religious activity.

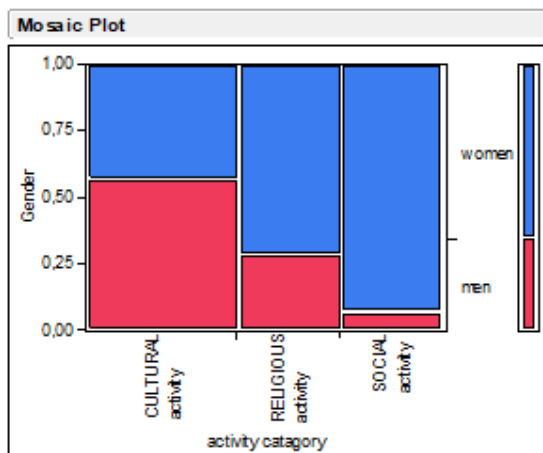


Figure 5. Preference types of activities by gender.

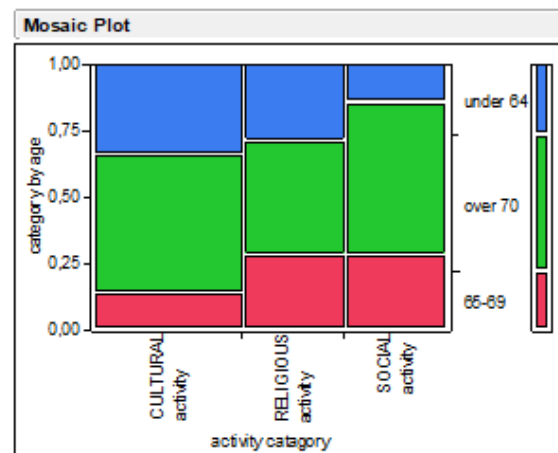


Figure 6. Preference types of activities by ages.



The preference distribution of 3 types of elderly activities can be seen on figure 5 and 6 :

- Distribution of activity category VS gender shows that women mostly do social and religious activity while men mostly prefer getting involved in cultural activity.
- Distribution of activity category VS age, shows that elderly under 64 years old mostly do cultural activities, 65-69 year old elderly mostly involve in religious and social activities, and elderly over 70 years old prefer doing all kind of activities.

3.2. Elderly’s motivation to be active

During the investigation, the elderly were also interviewed about the motivation to engage in any activities. The results can be seen in the graph below:

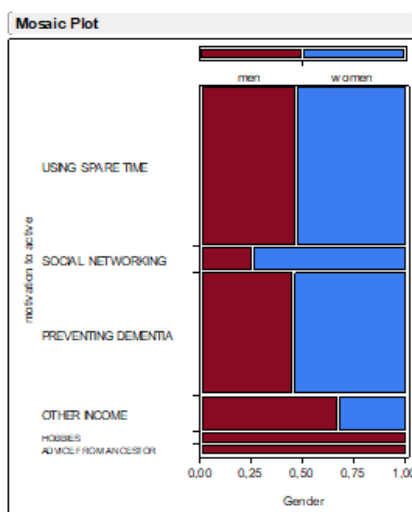


Figure 7. Motivation to engage in any activities by gender.

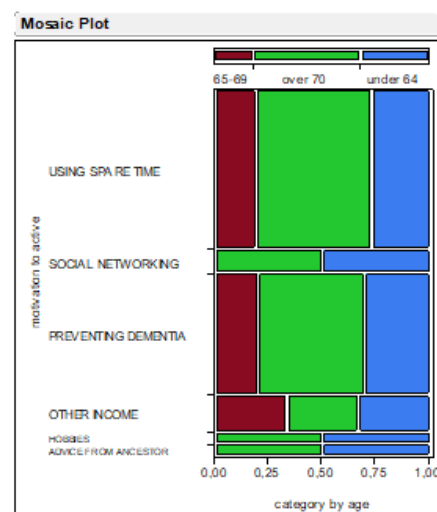


Figure 8. Motivation to engage in any activities by ages.

The graphs on figure 7 and figure 8 indicate:

- Distribution of motivation to be active VS gender shows that women mostly engage in activities with motivation to gain social networking, while men mostly do activities with motivation to do hobbies, applying the advice from an ancestor, and to get side income. In average, both women and men do activities, motivated by using spare time and preventing dementia.
- Distribution of motivation to be active VS category by age presents that elderly under 64 mostly motivated by making a social network, elderly in 65-69 year old are mostly motivated by earning other extra income, doing hobbies and doing advice from an ancestor. Whilst, elderly over 70 years old are mostly motivated by preventing dementia and using spare time.

3.3 Place preference

The elderly people preference for choosing places (built environments) to do their activities is provided in the graph below

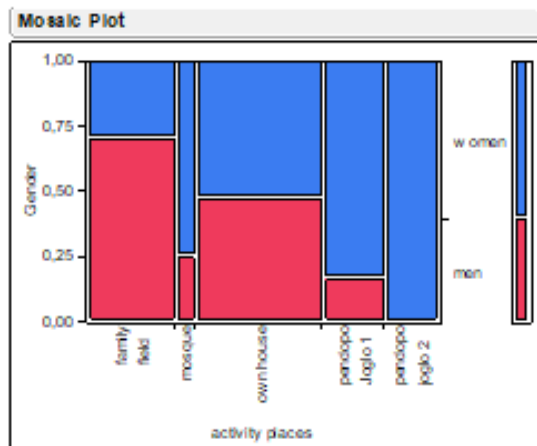


Figure 9. Place preference by gender.

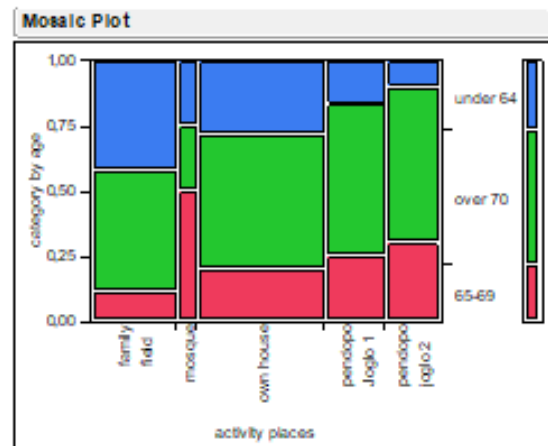


Figure 10. Place preference by ages.

The graphs on figure 9 and figure 10 display:

- Distribution of places VS gender shows that women mostly do sociocultural and religious activities in pendopo (both *Joglo 1* & *Joglo 2*) and in the mosque, while men mostly do activities in the family field area. Both women and men also do activities in their own house.
- Distribution of places VS age presents that the elderly under 64 and over 70 years old do outdoor activities in the family field, the elderly in the age of 65-69 year old do activities in the mosque. Some varieties of activity take place in their own house, and pendopo *Joglo 1* and *Joglo 2*.

In order to look at the friendly environment for the elderly people, the places are classified into 3 types: indoor, outdoor and semi indoor. Indoor area i.e: *pendopo Joglo 1* and *pendopo Joglo 2*, semi indoor area, for example, is *pendopo* of *Sinom House* and outdoor area, for example, is paddy field. (see figures 11,12,13,14).



Figure 11. Preference place: *pendopo Joglo 1*.



Figure 12. Preference place: *pendopo Joglo 2*.

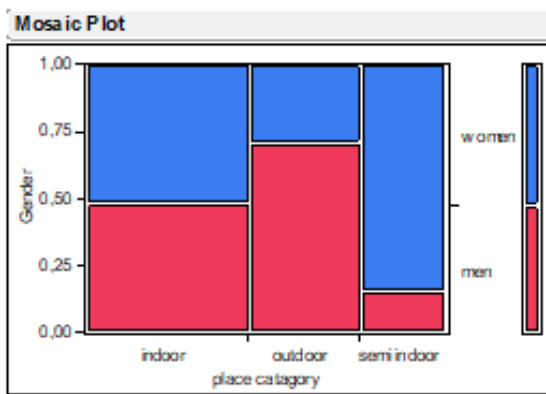


**Figure 13.** Example of semi outdoor: *pendopo* of *Sinom* house.

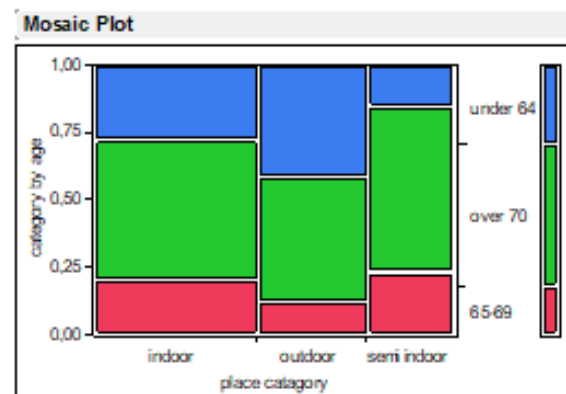


**Figure 14.** Preference place: family field.

The distribution of the elderly’s preference of place to do activities are described in the graph on figure 15 dan figure 16 below:



**Figure 15.** Place preference to do activities by gender.



**Figure 16.** Place preference to do activities by ages.

Figure 15 and figure 16 above show that:

- Distribution of place category VS gender indicates that women prefer semi indoor places, while men prefer outdoor places. However, both women and men prefer indoor places.
- Distribution of place category VS age shows that elderly under 64 years old and over 70 prefer outdoor places, elderly of 65 – 69-year-old prefer semi indoor and indoor, while elderly over 70 years old prefer in all types (both indoor, outdoor and semi indoor) of places.

The reason to choose places for activities reveals in graphs on figure 17 and figure 18 below:

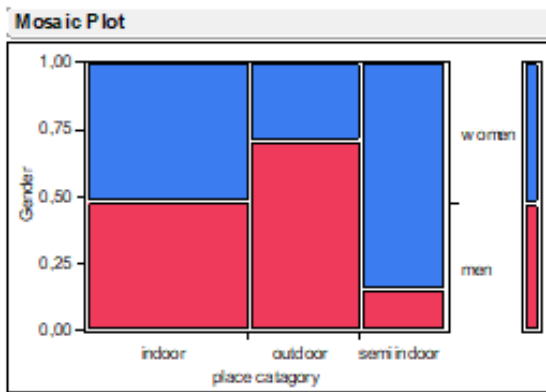


Figure 17. Reason to choose places by gender.

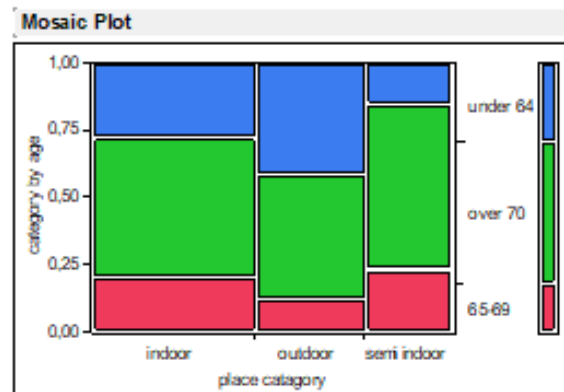


Figure 18. Reason to choose places by ages.

The graphs on figure 17 and figure 18 above present:

- Distribution of preference for choosing activity place VS gender shows that women prefer places that they feel in terms of protection guarantee, comfortable, and inaccessible walking distance. While men prefer places based on their habit. In general, both elderly women and men prefer places with a short distance.
- Distribution of preference for choosing activity place VS age represents that both elderly group under 64 and 65-69 year old prefer short distance mobility and comfort. Both elderly group of over 70 and 65-69 year old need protection. Whereas elderly over 70 like better moving in short and accessible distance, comfortable places, and places for everyday habit.

3.4. Perception of safety and security

The preference of activity places is categorized into safety – security terms as follows:

- Safety term refers to the distance (both short and accessible distance), and comfortable place.
- Security term refers to protection and places for habitual activities.

In relations to the safety and security classification of place preference is performed on figure 19 and figure 20 below:

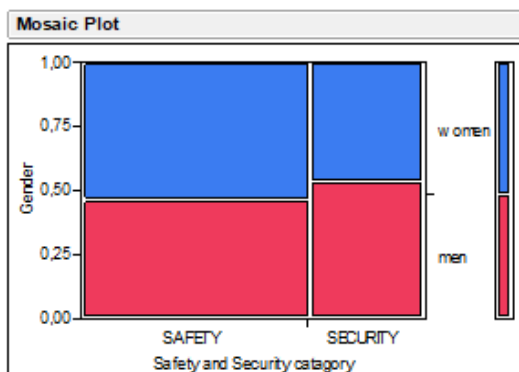


Figure 19. Safety – security places by gender.



Figure 20. Safety – security places by ages.

The above graphs on figure 19 and figure 20 show:

- Distribution of social safety and security VS gender indicates that women prefer safety most over men. However, on average both women and men prefer security matter.
- Distribution of social safety and security VS age shows that elderly over 70 years old mostly need both safety and security. Elderly under 64 years old mostly need security. Elderly in 65-69 year old mostly need safety.

### 3.5. Discussion of the findings

The elderly people as the older generation in Brayut Tourism Village showed the main group who want to keep maintaining the social and cultural tradition as assets for tourism attractions. It was seen from their motivation and willingness to prefer and get involved in social, religious, and cultural gathering activities. By meeting up to other elderly, they socially feel safe together. By participating in sociocultural gathering events, they concern about their continuation of traditions. By trusting others such as family members, surrounding neighbors, and the leaders or government authorities, the old generation will sense safe and secure in daily living.

As the environment includes physical and social aspects, the characteristics of a friendlier environment for elderly people also consists of tangible and intangible elements. Tangible elements that are considered as elderly-friendly are places with affordance concepts that are secure from crime with a good opportunity for social surveillance and other people's protection. It was shown in the results of place preference, that is own house and *pendopo* of *Joglo* House. These places are regarded as enough lighting, not isolated (in reasonable walking distance), and physically free of accident risk for elderly mobility and movement. Whilst, intangible elements that support the elderly mind and soul to consider safety and security in public places. For instance, the guarantee of healthcare services whether from family or other society members, religious matter, the family helps, social harmony, social trust, and togetherness among others.

Compare to another case study about intangible aspect needed in the elderly-friendly environment, as concluded in the study of sustainable, age-friendly cities in Palo Alto, California [28], it is very unique, and it can be summarized as follows. It is a very health-conscious community, and residents enjoy good health. The current healthcare needs of Palo Alto residents are well supported by existing public resources, complemented by residents' own provision as they are generally financially well-off. There are still significant areas of shortfall and opportunities for improvement. Improving the quality of the city services could avoid other foreseeable expenses like healthcare, and make Palo Alto a more age-friendly and sustainable community.

In another case, the research conducted by Serrano-Jimenez et.al generates a new method that supports the process of decision-making towards a sustainable urban renovation, through the multidisciplinary analysis of those main measures of residential adaptation, called "age-friendly", under four main blocks of analysis: Technical Requirements and People's demands; Constructive Process; Social benefits; and Economic revaluation [29]. Although the measures stand out for promoting an improvement in the accessibility conditions in buildings, it may also be appropriate for the Brayut case in the improvement of public places including the outdoor environment where the elderly people usually do the activities.

In terms of physical environmental support to motivate survivability and independent elderly life, it needs to regard the decline of both physical and cognitive abilities due to the aging process, based on three categories of elderly people. Free from accident risk in the physical environment is very significant to help and protection for the security aspect to support elderly peoples' mobility. This mainly influences the motivation of elderly regardless of the gender to be more active and independent. It can be represented in the preference of choosing the places of activity, which is in a short and reasonable walking distance. This result also indicates that places should be socially foreseeable. Therefore, prosthetic design, -that supports the degradation of elderly physical ability, but gives the opportunity to be more independent-, is necessary. Similar to the study of Wen et. al about the elderly in green spaces, it enabled the comparison of the elderly's preferences with other generation [30]. She summarized and found that elderly people take more attention to environmental barriers and dangers, for the reason that

they are anxious about accessibility, mobility, and safety. This concern reflects expectations that elderly people are sensitive to adjusting their nature-based recreation due to their physical limitations.

The older generation of Brayut Village residences seems to prefer doing their occasional activities with nature. They continue their living activities by using spare time in fulfilling the aging process with the surrounding natural landscapes of the village, such as getting involved in the activities of farming, harvesting, or managing the rice field they owned.

#### 4. Conclusion and recommendation

Social safety and security are significant for a more supportive elderly-friendly environment. This condition is vital to give guarantee for the elderly people to continue their aging process. They need prosthetic physical environment, which provides the opportunity to face the environmental challenges, while it is supported by a sociocultural condition that psychologically comfortable and free from fear. Nevertheless, it needs more advance methods to be applied to gain elderly preferences in utilizing their physical environment such as games or simulation methods.

Social trust in social life and family relationship are also necessary to support the elderly hood. This makes the common feeling that the physical environmental safety and security is affected by psychological attitude and sociocultural support such as the principle of Javanese mutual assistance (*gotong royong*) in Brayut Tourism Village. However, it is indispensable for the elderly in Brayut Village to be more familiar to the actual information technology to help them in keeping socially safe and physically secure such as the use of cctv and online help information.

It is also necessary to recommend the designers of the built environment to consider the elderly preferences, such as social surveillance, cultural aesthetics, accessibility, and well-equipped supporting facilities in designing and managing the village. Elderly people are also very sensitive to the walking distance, connectivity of wayfinding, air quality, noise, and wind speed.

#### Acknowledgment

This paper is a part of the full research entitled “The Development of Conservation Model of Traditional Architecture and Area, Supporting Sustainability of Tourism Village in Brayut, Yogyakarta Special Province”. We express our gratitude to Universitas Atma Jaya Yogyakarta for the financial funding research support. We also thank the research assistants, who helped us in collecting data through the way of interviews and observation.

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