ISSN No:-2456-2165

The Office Workers' Readiness Level to Inhabit in A Vertical Residential Co Living Concept in Medan, Indonesia

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Abstract:- Medan has a high population density, due to the high level of urbanization of people in making a living in the center of the city, causing the need for housing is increasing to be the fulfilled. The condition is contrary to the fulfillment of vacant land that is starting to be crowded with buildings, especially in the city center, which is already filled with offices. The office workers who especially work in the city center have to take a long time to reach their place of activity. One of the solutions for limited land for residential houses offered is the building towards vertical. So that the fulfillment of their place of residence and their attainment to their place of activity becomes easier. There are several types of vertical residential concepts, such as flats. However, these flats look shabby and the residents have poor social relations. Therefore, it is necessary to look for other alternative residential concepts. The introduction of the Co Living concept is one of the solutions offered in fulfilling housing by prioritizing socialization between owners as the main priority. The study aims to obtain the parameters in designing buildings with the concept of Co-Living Space. The study investigates several objects, including the community's readiness for the concept of residential Co-Living Space will be the level of community characteristics, the level of community space needs for public space and shared space. The research method is a qualitative-descriptive method with an analytical process based on field observations that goes through four stages starting with issue identification, theoretical input and literacy, distributing questionnaires, data analysis, and synthesizing planning and design concepts. The article emphasizes on how to design buildings with the concept of Co-Living Space for the community. The level of community readiness to live in residential buildings with the concept of Co-Living Space also discussed. Suggestions and input for the government in making policies related to vertical housing in Medan and produce a residential design prototype for Co-Living Space are explain further.

Keywords:- *Co-Living Space, Vertical Occupancy, Medan, Readiness Level, Workers.*

I. INTRODUCTION

There are several main problems in housing development including affordability (ratio of housing expenditure to income), adequacy (covering quality and density), environmental conditions, and availability. Affordability is a major problem on the demand side while the increasingly scarce availability of urban land is a major problem on the supply side. The development of the city is very rapid; the agglomeration of the city in a horizontal direction has resulted in the conversion of productive lands. City development in a horizontal direction makes city life inefficient, apart from the distance factor from one destination to another that is further away, as well as the consumption of natural resources needed to carry out activities in such a city. The global impact that is currently being felt is the occurrence of global warming, which causes the earth's temperature to increase, within 100 years from 1888 to 1988 it increased by 40 C. For this reason, city growth in a horizontal direction must be stopped immediately, and instead is to implement efficiency space, and utilize air space to accommodate urban activities [1].

As the third largest city in Indonesia, Medan is a city with quite rapid regional growth and development. This is due to the rapid population growth resulting higher land requirements. The city development will be directly proportional to population growth, where any increase in population growth will affect the development of the city. The city increased in residential area of 235.94% from 84.56 km2 (1989) to 199.50 km2 (2002). The increase in the number of settlements in the

ISSN No:-2456-2165

city of Medan is already in an exceeding condition, so it is necessary to have a policy that regulates settlement restrictions [2].

Co Living Space is a residence as one of the solutions in residential homes with a combination of horizontal residential concepts to vertical residences with factors to socialize while maintaining privacy. Residents can still feel comfortable socializing with other residents without reducing privacy. This residential model is also popular due its flexibility. The Co Living concept offers a shorter lease term. Co living is an affordable housing facility for everyone who wants a quality place to live at a low price. In the concept of Co Living Space, the supporting theories needed in the design of space programs and regional zoning are good environmental management theory and good public space theory, with area criteria covering diverse land functions, small blocks, good density, organic security system (eyes on the street) and public spaces that can provoke physical activity of users. While the supporting theory needed in the design of the Co-Living Space residential module is the theory of good residential building principles by OIKODOMOS, with the criteria of housing being able to respond to the human tendency to use technological devices, housing that can provoke closeness between residents and housing that has a universal design [3]. Then, accommodation the diverse needs of residents, the residential modules are divided into several types [4].

The concept of Co-Living Space will be a new thing for Medan. This concept is the development of a vertical residential concept that has been developed in several areas in Indonesia. This concept was introduced to the city of Medan in accordance with government programs and the strategic issue of the city of Medan on the provision of settlements and infrastructure services, a strategy that is being promoted at this time. Development of flats as vertical housing, both rented and owned, to support livable houses both on a large and large scale. non-large-scale areas, both in the form of self-help social assistance and communal PSU with due regard to adequate facilities and infrastructure [5].

The purpose of the study was to obtain the level of community readiness for housing with the concept of Co-Living Space. The study also aims to determine the level of characteristics of people living with Co-Living Space. Moreover, the research also conducted to determine the level of community need for housing both private and public spaces from horizontal to vertical. Finally, the study goal is to find solutions vertical building planning with the Co-Living Space concept, knowing the Strategies and Policies needed in vertical housing with the Co-Living Space concept, and making a prototype residential building design with the Co-Living Space concept. This research will later find parameters for designing vertical residential buildings by applying the concept of Co-Living Space, which is later expected to be an alternative concept of vertical housing that can solve problems in housing in general.

II. METHODOLOGY

This research uses the observation method, namely the activity of recording a turmoil with the help of instruments and recording it for scientific purposes or other purposes. Furthermore, observation is a collection of impressions about the world around him based on all the perceptual abilities of the five human senses.

Observation is also a process of selecting, changing, recording, and coding a series of behaviors and conditions with respect to organisms in situations, in accordance with empirical goals [6].

The analytical process in this study goes through four stages, starting with the identification of issues, input of theory and literacy, distributing questionnaires and data analysis, finally synthesizing the concept of planning and design. The first stage is identification through observation of issues and research problems carried out by looking at macro issues and phenomena, namely in the global scope, which is then revealed to the *Mezo* phenomenon.

Identification of issues is carried out by using data exploration methods regarding major phenomena that occur especially in Medan which are then outlined to raise issues in this research. Observations and interviews conducted with developers as residential developers in the city of Medan. Thus, it will be analyzed to obtain issues that develop in the development of housing and settlements in the city of Medan. The second stage is input theory and literacy, which are collecting and exploring related to theory and literature review on the planning and design carried out. Data collection is performed by exploring the literature from either government data, books, journals, dissertations, theses, or related articles. The data are including the typology of vertical residential objects with general explanations, criteria, and design requirements. From the literature obtained, several questions will be compiled into one questionnaire that will be distributed to 100 respondents.

The third stage is the stage of data analysis on the results of the questionnaire, to measure the level of community readiness for housing with the Co Living Space concept, the level of characteristics of people living with Co-Living Space, the level of community need for housing with changes in the needs of private and public spaces in general. Horizontal to vertical, and the concept of planning and design on the object needed to be a guide in the planning and design process. The fourth stage is the stage of formulating the Co-Living Space concept on the results of the analysis obtained. So that with this formulation, the existing standards for vertical housing in Medan are obtained according to the characteristics of the society.

III. RESULTS AND FINDINGS

The residence has a dynamic role that is not only a place for shelter but is closely related to humans as residents who obey the rules, behaviors, and desires that continue to develop according to the context of their time. Thus, persons' preference for their residence place will never stop at certain aspects at any one time. Preference in residence is a person's tendency to live or not live in a place [7]. This study intends to find out the concept that becomes a solution for the government and the community in getting good and decent housing with limited land in Indonesia. The desired concept is a concept that pays attention to the psychology of the occupants and the communication of the occupants with the environment and the surrounding community when housing horizontally. Hence, it is expected that this concept can be a good choice that can make this concept sustainable in housing and settlements.

The readiness of the community to be interested in living in a house for each individual is not only seen from the physical side of the house building but there is a psychological side that will create comfort in the formation of complete human identity. Based on this thought, social and psychological aspects become one of the important things in development to create sustainable buildings. This community readiness is also related to the social changes that occur resulting in changes in the residential environment that functions as a residential environment or environment equipped with environmental facilities and infrastructure that have close links with social aspects, economic cultural aspects, and health aspects.

From the results of the presentation, 91.2% of workers are familiar with multi-storey housing (vertical housing) even though they do not fully know what the Co Living concept is, and 8.8% do not know vertical housing as shown in Fig.1.

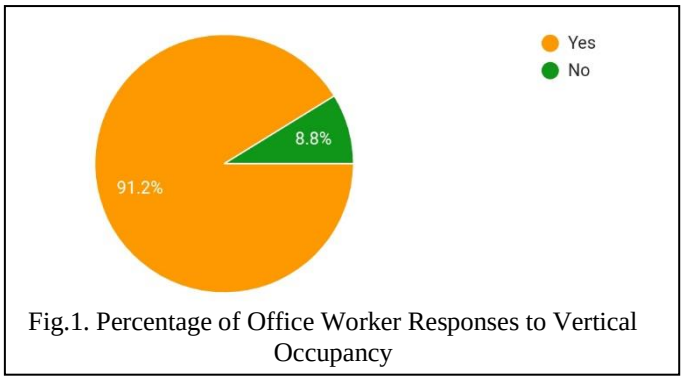

Fig.1. Percentage of Office Worker Responses to Vertical Occupancy

The workers tried to describe vertical housing that 42.6% said they had high privacy, 34.4% said that it was a luxury residence, 4.9% said that the housing was not well maintained such as flats, 45.1% of housing with low socialization among residents, 54.9% said that the dwelling did not have a yard, 1.7% had never heard of it, 0.8% the dwelling with the types, had complete facilities, a comfortable and safe dwelling, the dwelling did not have social interaction activities as shown in Fig.2.

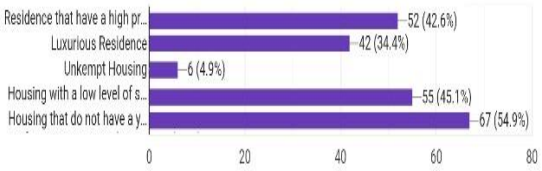

Fig.2. Percentage of Workers Response to Vertical Occupancy

This result also affects their readiness to live in vertical housing. From the results of a survey conducted as many as 60.2% of them are not ready to live in vertical housing, and 39.8% said they are ready to live in vertical housing as illustrated in Fig.3.

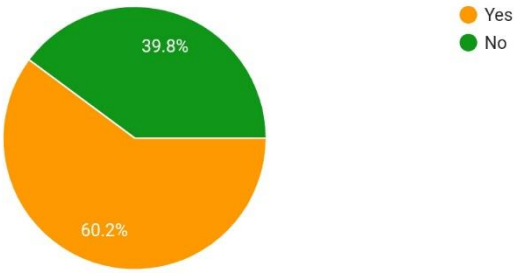

Fig.3. Percentage of Workers Readiness to Live in Vertical Housing

Readiness is then determined by the community's desire for the facilities they will get for vertical housing. Then it is offered what if the vertical housing offered is a vertical residence that has a concept to be able to interact between residents.

From the survey conducted, that 60.7% of them agreed to live in a vertical residential area and 39.3% said they were still not willing to live in a vertical residence as shown in Fig.4.

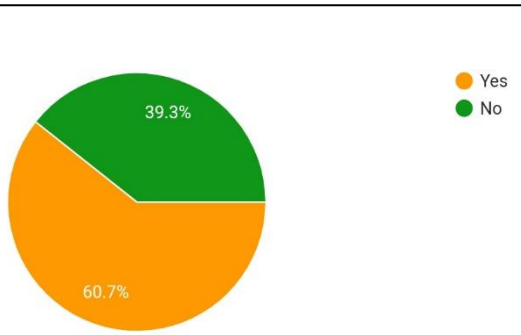

Fig.4. Percentage of work readiness for vertical housing with social interaction among residents

Mileage is also one of the occupants' factors in choosing a house to live in. From the distance to where they work, they want to be close to their place of work. The survey found that 46.2% wanted the distance to the job site to be 0-1 kilometers, 30.8% wanted the distance to the job site to be 1-2 kilometers, and 19.7% wanted the distance to be 2-4 kilometers. So that the short travel, time is the biggest factor for them to want to become residents of vertical dwellings. The survey result is listed in Fig.5 and Fig.6.

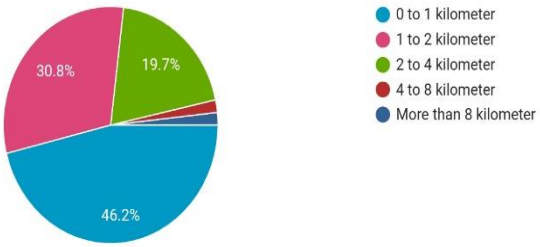

Fig.5. Percentage of workers' readiness for good travel time from their place of work to their residence

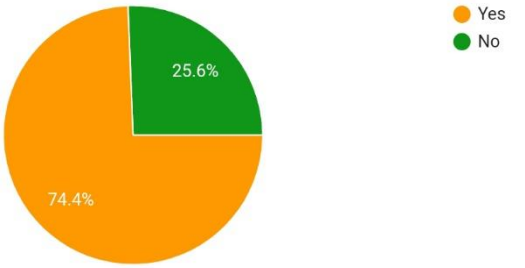

Fig.6. Percentage of worker readiness with travel time to live in vertical housing

As many as 74.4% stated that they are willing to live in vertical housing if the residential position is close to where they work while the rest are not ready. The workers want some of the facilities and infrastructure that they get for horizontal housing can be used for vertical housing. Some things that residents want in this case are workers for vertical housing, namely the existence of security or a security system, close to supermarkets or supermarket facilities, available clinics, entertainment venues or cafes, parks, space for them to rent to do business, parking and worship place as shown in Fig.7.

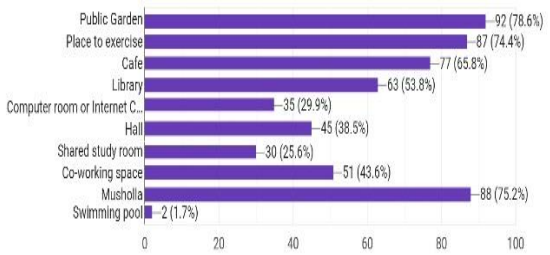

Fig.7. Percentage of facilities and infrastructure needed in vertical housing

Their readiness for vertical housing also has an impact on their willingness to meet the existing space requirements. The need for a common room as a space for interaction with residents, namely a park, a place to exercise, a cafe, a reading room or library, a computer room or internet cafe, a hall, a shared study room, a co-working space or a business area, a prayer room (musholla), swimming pool, mall or supermarket as illustrated in Fig.8.

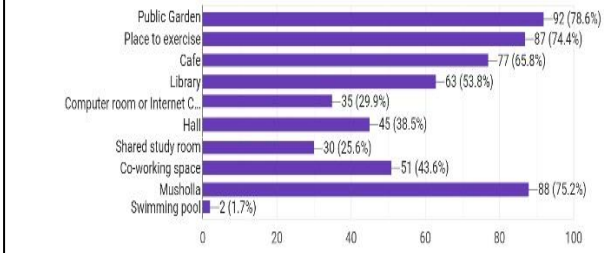

Fig.8. Percentage of shared occupancy that requires for vertical housing

Ownership is also important for residents. From the survey conducted, the majority have a desire to live in vertical housing; some even make vertical housing as their investment in the future. Ownership of vertical residences they want 69.5% want to become property, 24.6% want to be a company facility such as employee homes, and 5.9% want rental ownership. The result is shown in Fig.9.

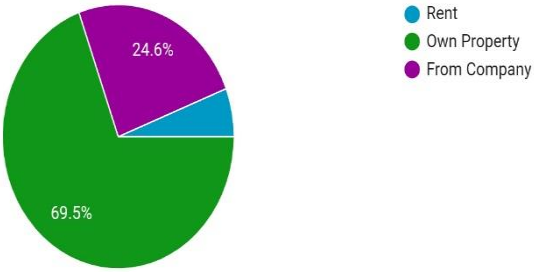

Fig.9. Percentage of ownership of vertical dwelling

One of the ownership of this vertical residence is rent. Therefore, the rental price desired by the workers is 42.2% able to afford 600 thousand – 800 thousand rupiah per month, 25.9% can afford 800 thousand – 1 million, 13.8% can afford to rent at a price of 1.2 million – 2 million rupiah, 11.2% could afford 1 million to 1.2 million rupiah, 6.9% could afford over 2 million rupiah. The survey result is listed in Fig.10.

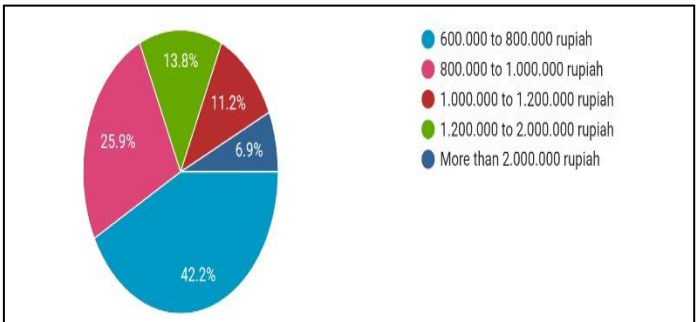

Fig.10. Percentage of workers readiness level for housing rent per month

ISSN No:-2456-2165

TABLE I. FACTORS THAT BECOME THE CRITERIA FOR COMMUNITY READINESS TO LIVE IN VERTICAL HOUSING

No	Indicator	Result	Study of vertical dwelling
1	Vertical Residential Concept	91.2% of respondents are familiar with vertical housing	The majority of the houses considered by workers as vertical housing are flats if judged from the lower middle class and apartments for the upper middle class level. Hence, they are still confused about vertical housing. This is the basis for fulfilling the co living concept to create sustainable vertical housing and provide comfort for residents.
2	Readiness to live in a vertical residence	60.2% of respondents are not ready to live in a vertical residence, and 39.8% of them said they are ready to live in a vertical residence	The concept of vertical housing in the city of Medan is residential upwards without considering the concept of comfort and sustainability of the meaning of the housing. So there are still many who have an interpretation of vertical occupancy upwards. For this reason, Medan has become a densely populated city to introduce the concept of co living as one of the people's choices for housing.
3	Social interaction	60.7% of respondents agreed to live in a vertical residential area and rest of them (39.3%) said that they were still not willing to live in a vertical residence.	Indigenous culture of the Indonesian people is a society that has high social values. So that interaction between people becomes an important factor in life. The habit of getting together, the habit of helping each other is our hallmark, even though time and habits have begun to erode with the daily routine. For this reason, workers do not agree to live in vertical housing because they consider vertical housing to be a barrier to interaction between residents.
4	Mileage	46.2% of respondents want 0-1 kilometers to work location, 30.8% of them 1-2 kilometers to work location, and the rest (19.7%), 2-4 kilometers distance	This is also an important part in choosing a vertical residential location. Because the desired vertical occupancy can provide workers with convenience in all things. They even want their mileage to be close to their work location, it will help their economy in saving expenses per month.
5	Facilities and infrastructure	Respondents want security or a security system, close to supermarket facilities, clinics, entertainment venues or cafes, parks, space for them to rent to do business, parking spaces and places of worship.	Can become a reference and recommendation in planning the vertical occupancy standard of the co living concept for the surrounding environment and space requirements.
6	Shared room facilities	The need for a common room as a space for interaction with residents, namely a park, a place to exercise, a cafe, a reading room or library, a computer room or internet cafe, a hall, a shared study room, a co-working space or a business area, a prayer room, swimming pool, mall or supermarket.	Can become a reference and recommendation in planning the vertical occupancy standard of the Co living concept for the surrounding environment and space requirements.

IV. CONCLUSION

The Co Living concept is one of the solutions offered to the limited land and high land prices in Indonesia. This concept wants to get easy in achievement, to provide sustainable housing. With these facilities and concepts, the research objectives are adjusted to the targets for the residential designation of the Co Living concept. The target object of the occupants taken in the study are office workers according to the main target in Indonesia to occupy Co Living residences. This can be concluded from their need for housing and their efficiency in their activities to make it easier for them to carry out their daily activities.

In this study, several criteria and their views on the choice of housing were carried out. From the results of the research conducted, it was found that the majority of workers had an enthusiastic level of readiness for the Co Living concept. Workers want to have a vertical concept dwelling while still influencing psychology and social activities such as socializing with neighbors, doing activities together. From the results of this study, it will produce design recommendations for residential office workers in Medan City.

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