Psychological wellbeing of coastal communities in Surabaya: a preliminary study

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Abstract. Happiness is the term that are linked with psychological wellbeing that were also associated with quality of life. The united nation includes wellbeing as one of the goals that are stated in its sustainable development goals (SDG). The SDGs were goals that are provided by the UN as a shared blue print for the country members to attain the goals in order to generate peace and prosperity for people and the planet, now and in the future. There is a need to set a strategy to attain the SDGs which one of it is to improve a person wellbeing. Therefore, aim of this study is to identify psychological wellbeing of the coastal communities in Surabaya that will become the basis of strategies to improve a person psychological wellbeing especially in the context of coastal communities.

1. Introduction

Data recorded by the United Nation shows that approximately 40 percent of the people in the world live within 100 kilometers from the coast line and in fact this number is claimed to be increasing in comparison to the total global population [1]. The number of people that live in the coast is growing for several reasons. It is not only because the ocean has become a source of livelihood for the coastal communities but also because the ocean provides positive psychological impact for the people who lived in the site.

Several research proved that ocean views are believed to give people feelings of comfort and peace of mind that are related to people psychological wellbeing [2]. This is also in line with previous findings from a research conducted by White et al in 2013 [3] which shows that the closer people live to the sea, the more likely they are to visit it. This activity associated with particularly strong feelings of ‘restoration’ which, over time, can help in reducing stress. Beside of that, physical activity and also social interaction was found much higher in the people that live by the sea compare to the people that live in urban area. This research concluded that a number of health and well-being promoting behaviors are encourage by the coastal environments and people who live near the coast are more likely to make use of these opportunities [3]. Studies concluded that living in the coast give a positive psychological impact especially for their psychological wellbeing [2]. Beside of that, coastal ecosystem also provides natural resources that become source of income for the coastal communities. As such, coastal ecosystems provide products and services which give both direct and indirect advantages to the people.
in coastal areas. Hence, the destruction of marine ecosystems has real and profound economic, social, and psychological costs and impact to their well-being [4].

Psychological wellbeing is the term that are linked with happiness, quality of life and mental health [5]. The United Nations acknowledges wellbeing as part of the Sustainable Development Goals (SDG) that need to be achieved by all of the state members. It is specifically stated in the third SDG’s that ensuring healthy lives and promoting the wellbeing for all at all ages is essential to sustainable goal [5]. The clear link between ecosystem status and human well-being was initially and clearly presented in the Millennium Ecosystem Assessment (MA) in 2005 [4]. However, there has been a numerous evidence that the coastal community’s wellbeing is threaten by climate change.

According to Brett in 2019 [1], coastal communities are the most vulnerable population to climate change. This is due to the fact that they lived in the coast and therefore geographically they are more prone to disasters that induced by climate change such as flooding that cause by the risen of the sea level, warmer sea temperature, and also the possibility of tsunami. The United Kingdom Government Office for Science in 2017 [6] has categorized several key points that could threats the health and wellbeing of coastal communities in to several domain which are human activities in the coastal area, environmental threat, pollution of the coast and marine environment, socio-economic and cultural threats [6]. Climate change threats is not only affecting developed country but also developing country such as Indonesia.

Indonesia is an archipelagic countries that consist of 17,508 islands extending 5,150 kilometers (3,200 miles) east to west, between the Indian and Pacific Oceans in Southeast Asia [7]. Indonesians are separated by seas and clustered on islands. The largest cluster is on Java Island, with some 130 million inhabitants (60 percent of the country’s population). Surabaya is the second biggest metropolitan cities in Indonesia which is located in Java Island that has 53,653 kilometers of coastline [8]. Surabaya is also known as coastal city since it has 24 coastal villages that are managed by the Surabaya city government [8, 9]. The Surabaya geographical condition made the inhabitants prone to the climate change disaster. Potential disaster threats which are identified are flooding that occur as the consequences of the sea level rise and the high tidal wave. The tidal flood will bring not only environmental impact but also economic and social impact for the coastal communities.

Study found that tidal flooding that happen in Surabaya in January until February 2010 period has tremendous impact to the Surabaya inhabitants livelihood since it has stopped the business activities around the coast including stopped the loading and unloading activities in the port. Beside of that, some of the people live in the most affected area such as Asemrowo and Krembangan districts also has to lose their belongings [10]. Since the tremendous impact of flood for Surabaya residents, therefore there is a significant need to reduce the risk and mitigate the impact of disaster.

In order to mitigate and reduce the impact of climate change for the coastal communities, according to The United Kingdom Government Office for Science in 2017, there is a need to analyses factors that associated with future trends of the coastal communities to identify how coastal communities might change in the coming years including their psychological wellbeing conditions [6].

Rigorous study of demographic and socio-economic trends in the range of coastal communities in Surabaya would allow appropriate actions plan that could be taken to meet the Sustainable Development Goals especially in term of health and wellbeing objectives especially for the Surabaya city government. Beside of that, the identification and analysis could also help Surabaya city government, policy makers, and other stakeholders to mitigate the impact of climate change disasters especially for the coastal communities in Surabaya. Thus, aim of this research is to identify psychological wellbeing of the coastal communities in Surabaya.

2. Methodology

2.1 Participants
This is a preliminary study that applied cross-sectional design. This study involving 44 participant that live in Surabaya City. All respondents should complete Javanese psychological well-being scale version 1.1.

2.2 Procedures
Participants involve in this study was given a set of questionnaires which consist of three section which are informed consent, identity, and Javanese psychological wellbeing scale respectively. The informed consent was used to confirm the participant willingness to participate in this research. The second part is identity parts where participants fill their identity which includes: age, gender, education background, job, and income level. The third part is the Javanese psychological wellbeing scale version 1.1 which is the short version of the previous version. The Javanese psychological wellbeing scale version 1.1 has 18 items and 6 dimension that has develop from the previous version. The dimension of the Javanese psychological well-being scale include: life satisfaction, environmental mastery, hope, dan happiness in life, self-aware, and freedom. The psychological wellbeing scale was developed based on Javanese Psychological Wellbeing concept [5]. Data were analysed by using descriptive statistical methods.

3. Results
3.1 Socio-Demographic Characteristic
All of the participants were live in Surabaya city. Most of the respondents were female (93%) with age group lies from 18-23 year old. The socio economic status of the subjects in this study were in middle income category. The summary of the demographic profile of the participants in this study could be found in the Table 1.

| Characteristic                        | f | % |
|---------------------------------------|---|---|
| Age (years):                          |   |   |
| 18-20                                 | 30| 68|
| 21-23                                 | 14| 32|
| Gender:                               |   |   |
| Male                                  | 3 | 7 |
| Female                                | 41| 93|
| Socioeconomic status:                 |   |   |
| Low income                            | 16| 36|
| Middle income                         | 19| 43|
| High Income                           | 9 | 22|

3.2 Psychological Wellbeing
The results confirmed that the vast majority of the respondents in this study have high level of psychological well-being (77%), as presented in Table 2.

| Psychological wellbeing level         | f | % |
|---------------------------------------|---|---|
| High                                  | 34| 77|
| Average                               | 9 | 21|
| Low                                   | 1 | 2 |
The results also show that the level of psychological wellbeing among coastal communities in Surabaya were different between age group and socioeconomic status. Most of both adolescence (86%) and adult (67%) in this study were happy. The level of psychological wellbeing based on age are provided in Table 3.

Table 3. Psychological wellbeing level based on age

| Psychological wellbeing level | Age   | f  | %  |
|-------------------------------|-------|----|----|
| High                          | 18-20 | 20 | 67 |
|                               | 20-23 | 12 | 86 |
| Average                       | 18-20 | 10 | 33 |
|                               | 20-23 | 1  | 2  |
| Low                           | 18-20 | 0  | 0  |
|                               | 20-23 | 1  | 2  |

Level of psychological wellbeing also different between socioeconomic status. People in the high and middle socioeconomic status was happier than the one that are in the low economic status with 67% and 85% respectively. The summary of level of psychological wellbeing based on socioeconomic status could be found in Table 4.

Table 4. Psychological wellbeing level based on socioeconomic status

| Psychological wellbeing level | Socioeconomic | f  | %  |
|-------------------------------|---------------|----|----|
| High                          | High income   | 6  | 67 |
|                               | Middle income | 17 | 85 |
|                               | Low income    | 12 | 75 |
| Average                       | High income   | 3  | 33 |
|                               | Middle income | 2  | 15 |
|                               | Low income    | 3  | 19 |
| Low                           | High income   | 0  | 0  |
|                               | Middle income | 0  | 0  |
|                               | Low income    | 1  | 6  |

4. Discussions

The data analysis shows that 77% of the population in this study has high level of psychological wellbeing. However there are several notable differences of psychological wellbeing level that are identified between age group, gender, and socioeconomic status.

The data shows that 86% of population in the early adult age were the happiest group of people. These circumstances is understandable since the early adulthood is emotionally more stable compare to adolescence age group. According to the previous study conducted by Silvers et al in 2012, age have a positive relationship with emotional regulation. This study prove that that adult were more self-regulated than adolescence [11]. The ability to manage positive and negative emotion influence individual psychological wellbeing. This is in line with our finding that there are differences on psychological wellbeing level between adolescence and early adult age group.

Differences in psychological wellbeing level also found between different socioeconomic status. In this research, we found that 85% of people from middle socioeconomic status has high level of psychological wellbeing. Taylor et al in 2011 found that financial condition affect people psychological wellbeing [12]. This is due the fact that people who have financial resources could freely choose what lifestyle that they would have. In other words, financial condition influence people lifestyle preferences that give a significant impact for individual psychological wellbeing.
5. Conclusions
A preliminary study on the psychological wellbeing of the coastal communities in Surabaya has been conducted based on a survey research. The descriptive statistics suggest that the vast majority of coastal communities in this study have a high psychological wellbeing. In addition, the result of the study also concludes that there are differences in level of psychological wellbeing based on age group and socioeconomic status. However, the research was limited by the fact that the participants involved in this study was only Surabaya people. Therefore, future research should include more participants from other region in order to increase the generalization ability of the research.

Author Contribution
The articles were developed by the author herself and there is no other party that involved in the research.

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