Therapeutic Community (TC) as Drug Rehabilitation Center Design Principles

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Abstract. Drugs are something that has been fought for for a long time and rehabilitation is one way to save victims from drug dependence. Therapy and rehabilitation methods using the Therapeutic Community approach are inseparable from the therapeutic communication carried out by addiction counselors which functions to create a comfortable atmosphere for residents who are drug addicts. This study aims to determine the community therapeutic variables at the rehabilitation center that are often used by patients: bedroom, common room and dining room at the drug rehabilitation center. This research method uses a comparative method by identifying the application of the therapeutic community principles in case studies. The buildings being compared include The Chiang Mai Cabin, the Lido BNN Drug Rehabilitation and Therapy Unit, the FAN Campus, West Java, and the Regional Mental Hospital, Bangka Belitung. The results showed that each room has a quality standard that must be met in order to increase the level of patient comfort at the Drug Rehabilitation Center. These results can help architects in designing drug rehabilitation centers with a therapeutic community approach.

Keywords: Therapeutic Community Principles, rehabilitation centers, drug rehabilitation.

1. Introduction

Drugs have become something that must be fought for in Indonesia and even in the world for a long time. Various regulations both at the domestic and international levels have also been made and designed so that the state can be free from the grip of drugs. Drug crimes continue to increase along with technological developments so that these crimes are increasingly widespread and become transnational crimes. Until now, the government has worked hard to eradicate illicit drug trafficking, but its abuse continues to increase to everyone regardless [1]. According to Lambertus Somar (2001), each type of drug has a special impact on a person's health, behavior, thoughts, and feelings. The triggers for drug abuse in a person vary widely and vary from person to person. However, the travel pattern and process is the same for everyone and for every drug. It always starts from need, pleasure, addiction, and finally enters the addiction stage [2].
Therefore, the rehabilitation process is one way to save victims from drug dependence. Because rehabilitation is an effort to recover drug addicts from dependence so that they can live a normal life in the community. Successful drug rehabilitation will increase the community resilience in long-term sustainability. This rehabilitation needs a series of coordinated and integrated efforts, ranging from medical efforts to mental development. Psychosocial and religious beliefs to improve the ability to adapt to their potential, be it physical, mental, social, or economic. In the end, they are expected to be able to deal with drug abuse and be able to interact with the community well [2] [3].

According to the national police, in 2018 Jakarta touched 5857 drug cases. With this high number of drug users or addicts, it is not accompanied by the availability of a rehabilitation center that is appropriate and comfortable for its users [4]. Although there are already several rehabilitation centers, they cannot yet accommodate many patients. According to the BNN in Jakarta, there are only 5 community component rehabilitation institutions that have met the standards, some of which are the Kapeta Foundation, Kambal Care, the Karani Sani Madani Foundation, the Al Jahu Foundation, and Natura. Where most of the rehabilitation institutions use the Inpatient Social Rehabilitation service settings [5]. Therapeutic Community (TC) Is one of the effective approach methods that can restore former drug abuse in order to return to the community, therapeutic and rehabilitation methods with the Therapeutic Community approach are inseparable from the therapeutic communication by the addiction counselor to create a comfortable atmosphere for residents who are residents drug addicts in the rehabilitation program [5]. This study aims to define the therapeutic community variables in sleeping rooms, common rooms and dining rooms in drug rehabilitation centers.

2. The methodology

The methodology of this research is comparative study, in which this study uses four buildings to be compared. The buildings that being compared comes from Indonesia and overseas: the Chiang Mai Cabin in Bangkok, Lido BNN Narcotics Rehabilitation and Therapy Unit in Sukabumi, Indonesia, FAN Campus in West Java, Indonesia, and the Regional Mental Hospital in Bangka Belitung, Indonesian. Some of the case study are observed directly, while the others are collected from literature study.

The observation conducted by qualitative study which address the aspect from therapeutic community. This concept has 39 variables [6], but this study focusing on 10 variables that can affect the design of Drug Rehabilitation Center directly, which is:
1. Provision of works of art and aesthetics that can improve the quality of space
2. Dimensions of the space provided are adequate
3. Provide visual privacy and noise
4. Reducing noise sources
5. Provide natural lighting
6. Maintain outdoor air quality
7. Give a color that can reduce environmental pressure
8. Provide natural scenery
9. Provide art that depicts nature
10. Provide a storage area for patients

3. Result and Discussion
3.1 Bed Room

In the Chiang Mai Cabin project, the Cabin gives privacy to each resident by placing each resident in private room. This room also utilizes natural lighting which can be seen on the window that has a size large enough so that sunlight can enter the maximum. The size of the
room can also be considered adequate because this room has a lot of supporting furniture such as TVs, study tables and single sofas. The Lido BNN bedroom is quite different where the residents sleeps with another 30 people in each ward by using a bunk bed. The bed is equipped with a small cupboard that placed on the side. The bedroom also has a window located on one side of the wall so that sunlight can enter the room. The bedroom at FAN Campus is similar with Lido, where the bed using a bunkbed and small cupboard on the side. Then the window is also located on one side of the wall with the function of entering natural lighting. Meanwhile, the Regional Mental Hospital only has 10 people in each ward. The walls of this room are light blue with trellis window openings to maximize air and natural light.

![Figure 1. The bedroom of the Cabin (up right), Lido BNN Rehabilitation Centre (up left), the Fan Campus (bottom left) and Regional Mental Hospital (bottom right)](image)

Herewith the comparison of the Therapeutic Community element in bedroom

| Therapeutic Variables | The Cabin | Lido BNN | FAN Campus | RSJD Babel |
|-----------------------|-----------|----------|------------|------------|
| Provision of works of art and aesthetics that can improve the quality of space | a. Ceiling  
b. Painting  
c. Plant | N/A | N/A | N/A |
| Dimensions of the space provided are adequate | 3 M x 4 M | 8,5 M x 12,5 M | 3 M x 3,5 M | 8,5 M x 10 M |
3.2 Common Room

| Provide visual privacy and noise | Provide wall boundaries to the room | Provide wall boundaries to the room | Provide wall boundaries to the room | Provide wall boundaries to the room |
|---------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|-----------------------------------|
| Reducing noise sources          | N/A                               | N/A                               | N/A                               | N/A                               |
| Provide natural lighting        | Give a window to the room         | Give a window to the room         | Give a window to the room         | Give a window to the room         |
| Maintain outdoor air quality    | Openable window                   | Openable window                   | Openable window                   | Openable window                   |
| Give a color that can reduce environmental pressure | White | White | White | Light Blue |
| Provide natural scenery         | Outside views                     | N/A                               | Outside views                     | N/A                               |
| Provide art that depicts nature | Sea painting on the bed            | N/A                               | N/A                               | N/A                               |
| Provide a storage area for patients | Table under the TV               | Give a drawer next to the bed     | Give a drawer next to the bed     | Give a drawer next to the bed     |

| Provide natural scenery         | Outside views                     | N/A                               | Outside views                     | N/A                               |
| Provide art that depicts nature | Sea painting on the bed            | N/A                               | N/A                               | N/A                               |
| Provide a storage area for patients | Table under the TV               | Give a drawer next to the bed     | Give a drawer next to the bed     | Give a drawer next to the bed     |

Figure 2. The common room in the Cabin (up right), Lido BNN Rehabilitation Centre (up left), the Fan Campus (bottom left) and Regional Mental Hospital (bottom right)

The common room area provided by The Cabin has a capacity of 5-6 people where in this area the residents hold joint consultation activities. This area also utilizes natural lighting where
the window size is wide enough to insert sunlight to the maximum. In Lido BNN project, shared space can also be used as a dining room with a portable furniture. The FAN Campus common room area is located on the 2nd floor, in the middle of the building. This area can enter the maximum natural lighting due to the window located on the corner of the wall and the application of skylights on the top of the building. While the common room area in Regional Mental Hospital, the colors on the walls use light blue. This area is also in the middle of the other room by entering sunlight through the rooms around it. In this area there are also TVs and sofas that can be used at free time. Poster-prohibited poster use of drugs also displayed on some parts of the room's walls.

### Table 2 Analysis of key Therapeutic Community factors in the common room

| Therapeutic Factor                                                                 | The Cabin | Lido BNN | FAN Campus | RSJD Babel |
|-----------------------------------------------------------------------------------|-----------|----------|------------|------------|
| **Provision of works of art and aesthetics that can improve the quality of space** | a. Ceiling Lamp | N/A      | N/A        | N/A        |
| Dimensions of the space provided are adequate                                      | 3 M x 3 M | 16 M x 12.5 M | 9 M x 9 M | 4 M x 4 M |
| Provide visual privacy and noise                                                   | N/A       | N/A      | N/A        | N/A        |
| Reducing noise sources                                                             | Provide wall boundaries to the room | N/A | Provide wall boundaries to the room | N/A |
| Provide natural lighting                                                            | Give a window to the room | Give a window to the room | Give a window to the room | Give a window to the room |
| Maintain outdoor air quality                                                       | Openable window | Give a grating opening in the room | Openable window | Openable window |
| Give a color that can reduce environmental pressure                                | White     | White    | Brown      | Light Blue |
| Provide natural scenery                                                             | Outside views | N/A     | Outside views | N/A         |
| Provide art that depicts nature                                                     | N/A       | N/A      | N/A        | N/A        |
| Provide a storage area for patients                                                | N/A       | N/A      | N/A        | N/A        |

### 3.3 Dining Room

The dining room provided by The Cabin has an outdoor concept where there is a table to serve food in the middle of the room. The chandelier used also has a newfangled design that adds to the aesthetics of the room in the dining area. The furniture used in this area mostly uses wood. In Lido BNN rehabilitation center, the common room can also be used as a dining room by removing the portable furniture. The dining room area at FAN Campus is located at the south of the building. The dining room applies many window openings to provide natural lighting. In terms of material, most of the material used in this area uses wood material. For the
distribution of seats divided into 8 people on each table and arranged facing each other. While the dining room in Regional Mental Hospital in Bangka Belitung only has a capacity of 12 people wherein the maximum capacity of the rehabilitation center reaches 20 people. The dining room also has many openings so during the daytime this room does not need a lot of lights to turn on.

![Image of dining room](image)

**Figure 3.** The dining room in the Cabin (up right), Lido BNN Rehabilitation Centre (up left), the Fan Campus (bottom left) and Regional Mental Hospital (bottom right).

| Therapeutic Factor                                      | The Cabin | Lido BNN | FAN Campus | RSJD Babel |
|--------------------------------------------------------|-----------|----------|------------|------------|
| Provision of works of art and aesthetics that can improve the quality of space | a. Ceiling | N/A      | N/A        | N/A        |
|                                                        | b. Plant  |          |            |            |
|                                                        | c. Furniture |        |            |            |
| Dimensions of the space provided are adequate          | 10 M x 4 M | 16 M x 12.5 M | 3 M x 9 M | 3 M x 9 M |
| Provide visual privacy and noise                       | N/A       | N/A      | N/A        | N/A        |
| Reducing noise sources                                 | Provide wall boundaries to the room | N/A | Provide wall boundaries to the room | N/A |
4. Concluding Remarks

From the four literature studies, in the fourth bedroom the building uses walls as a barrier between rooms in order to provide visual privacy and noise. Then the bedroom is also given a window that can be opened and closed in order to take advantage of natural lighting and maximize the quality of outside air. In terms of color application, most of the buildings use white in the bedrooms provided. In the common room area, the four buildings provide windows that can be opened and closed as well. The dining room area provided does not provide visual privacy and noise, there is no artwork depicting nature, but window openings are provided in this area. An architect should pay attention on this principle when designing the drug rehabilitation center with therapeutic community approach.

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