ANALYSIS OF SPATIAL REQUIREMENT FOR CONFINEMENT CENTRE TO SUPPORT THE NEEDS OF WOMEN WITH POSTPARTUM DEPRESSION

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ABSTRACT

Women during the postpartum period are vulnerable to the problems of mental health. Having various emotional, behavioural, and physiological changes in their lives, postpartum women experience negative impacts on their thought, feeling, behaviours, and relationships with others. Some women need unique rehabilitative spaces to reduce the negative impacts of postpartum depression. Architectural solutions with designated spatial provisions may help postpartum women to curb the negativity during their confinement stage. Hence, this research intends to analyse the spatial requirement of confinement facilities based on precedent studies that support the psychological and physical needs of postpartum depression women. This research was conducted using a qualitative approach, where precedent studies of postpartum confinement centres were analysed and compared via desk research to generate a set of spatial requirements for the effective rehabilitation of postpartum depression women. In addition, researchers conducted interview sessions with experts to substantiate the finding of earlier comparisons. This research found that healing and reducing the impact of negativity among postpartum depression women depends not only on physical spatial development, but the most crucial aspect is the provision of a support system from family members and friends. Nevertheless, the research had outlined spatial requirements for designing a confinement centre to support the psychological and physical needs of postpartum depression women, especially those in Malaysia. The research would also serve as a platform for an effective architectural solution for reducing the negative impacts of postpartum depression among women.

Keywords: Post-partum depression, healing environment, confinement centre, design solution, spatial analysis.

1.0 INTRODUCTION

Many postpartum women experience the agony of after-delivery, such as sadness, apparent mood swing, and anhedonia. Despite enjoying the joyous experience of having newborn babies, some postpartum women cannot cope with changes, which is a common symptom of depression and is considered one type of mental health disorder. Postpartum women are vulnerable to mental health problems because they must go through various changes in their lives, including emotional, behavioural, and physiological changes. These changes often significantly impact postpartum women's thoughts, feelings, behaviours, and relationships with others (Ciarrochi et al.,2002). According to Curamericas Global report (2017), postpartum depression is relatively common among women, with up to 41% prevalence of perinatal mental disorders in developing countries. The number is lesser in developed countries, 15% (Yusoff and Abdullah, 2021).

Conventionally, women with postpartum depression are usually treated with medicine, social isolation, and spatial confinement. While the medicinal treatment relates to the modern conventional drug treatment, social isolation and spatial confinement are relevant to architectural solutions that might support the psychological and physical needs of postpartum depression women. A question arises on whether an architectural solution could reduce the impacts of negativity among postpartum women. Hence, this research intends to analyse the spatial requirement of confinement facilities based on precedent studies that support the psychological and physical needs of postpartum depression women. The finding of this research would outline the ideal spatial requirements for the design of a confinement centre for women with postpartum depression.

2.0 LITERATURE REVIEW

Generally, depression is detected when symptoms prevail among the sufferers. The most common groups of people with a major depressive disorder are classified under these three (3) categories, the elderly, people with chronic medical illness, and pregnant or postpartum women. Women with postpartum depression usually reveal having a depressed mood, losing interest or pleasure in something they usually like, enduring decreased energy, feelings of guilt or low self-worth, disturbed sleep or appetite, and poor concentration.

In Asia, a statistic indicates a vast range percentage, from 3.5% to 63.3%, of mothers suffering from postnatal depression (Klainin and Arthur, 2009). Concerning the range, WHO (2021) reports that in Malaysia, 13% of women in the postpartum period experience mental health disorders, with depression being particularly common. In contrast, Valerie (2021) reports that Malaysia has the lowest postpartum mood and anxiety disorders (PMAD) rates, at 3%. In comparison, the United States has up to 15%. Thus, Valerie perceives that Malaysia has the lowest percentage of postpartum depression in Malaysia, perhaps due to the traditional confinement method still being practised in Malaysia.

Postpartum depression among women commonly ensues during the period after giving birth. Postpartum depression is also called postnatal depression (PND) and is statistically grouped with Perinatal Mood and Anxiety Disorders (PMAD) (Lynn, 2019). Most of the time, mothers at risk are rarely detected, and they are also underdiagnosed. However, a study among 387 postpartum women in Malaysia indicates that 79.6% of respondents have depression symptoms (Wan Mohamed Radzi et al., 2021). Postpartum depression affects women and their relationships with their babies and family members (Ugarriza, 2004). Among the most devastating consequences of postnatal depression are the high risks of women having suicidal ideation, suicidal attempt, or eventually suicide (Vigod et al., 2016).

There are three degrees of postpartum affective disorder; 1) postpartum baby blues, 2) postpartum depression, and 3) postpartum psychosis. Table 1.0 shows the summary of postpartum affective disorder on the aspects of prevalence, onset, duration, and the treatment needed (WHO, 2009).

Table 1 The summary of postpartum affective disorder

Disorder	Prevalence	Onset	Duration	Treatment
Postpartum Blues	30-75%	Day 3 or 4	Hours to days	No treatment requires, other than reassurance
Postpartum Depression	10-15%	Within 12 months	Weeks- Months	Treatment is usually required
Postpartum Psychosis	0.1-0.2%	Within 2 weeks	Weeks- Months	Hospitalisation is usually required

(Source: WHO, 2009)

2.1 Postpartum Blues (PBB)

Postpartum blues (PBB) is the most common mood disturbance after childbirth. PBB usually happens after a few days of delivery, which involves between 3 to 4 days. In PBB, the postpartum women may experience sudden mood swings, irritability and impatience, unexplained weeping, sleeplessness, generalised anxiety, crying spells, and appetite disturbance (Clemmens, 2002). Nevertheless, PPB is considered a mild postpartum affective disorder and only emerges in a short time. Women with symptoms of PBB generally do not require treatment other than reassurance and support from people around them. Having a support group of new mothers or talking to other mothers would help to reduce the symptoms (Bloch et al., 2006). However, if the mild symptoms were unobserved in the first year of the postpartum period, up to 20% of women with postpartum blues may develop significant depression (Bloch et al., 2006).

2.2 Postpartum Depression (PPD)

Postpartum depression (PPD) usually begins within the first six weeks of postpartum. The symptoms of postpartum depression are generally the same as postpartum blues, which are sadness, despair, anxiety, and irritability. Still, the problem may last longer, and the feeling is felt more substantial than those experienced by women with postpartum blues. Postpartum depression is a severe condition that requires professional bits of help. Clemmens (2002) claims that once women's ability to function properly is affected, the intervention of healthcare providers is strongly needed.

2.3 Puerperal or Postpartum Psychosis (PPP)

The most severe condition of postpartum women disorder is called Postpartum psychosis (PPP). PPP is an uncommon mental illness that can dangerously affect new mothers. This illness makes women lose their reality, to the magnitude of having auditory and visual hallucinations (Sit, 2006). Other symptoms include insomnia, feeling angry or frustrated, restlessness, and having strange feelings and behaviour. Women who have postpartum psychosis are in dire need of treatment and should be hospitalised because they are at risk of hurting themself or someone else.

2.4 Potential Architectural Solution

Research has shown that architecture may provide the solution for the problem of depression. Many concerns on depressive disorder had been partly resolved by providing studies in the therapeutic environment, or sometimes called healing environment. Based on the desk research, it is found that two (2) categories of parameters are needed to create a healing environment: physical and psychological parameters.

For physical parameters, there are five (5) considerations postpartum women need, and these are personalised space (Huisman et al., 2012; Ulrich et al., 2018), good exposure to natural lighting (Walch, 2005), access to natural elements (Zetterquist, 2009), acoustic comfort (Ulrich et al., 2018), and positive distraction (Zetterquist, 2009). Meanwhile, the proposed recovery centre should provide both legibility of space (Zetterquist,2009) and privacy (Ulrich et al., 2018) for psychological parameters. Table 2 shows the parameters needed to induce a healing atmosphere in the built environment.

Although many scholars have outlined the parameters needed for a healing environment, there is not much research specifically on the spatial requirement of confinement facilities. In this regard, this research intends to analyse the spatial requirement of confinement facilities based on precedent studies that support the psychological and physical needs of postpartum depression women. However, this spatial study is limited to spaces that offer the physical development of conducive confinement centres for postpartum depression women.

Table 2 The parameters for inducement of a healing environment

Physical Parameter	Psychological Parameter
1. Personalised space • reduce stress • stabilise emotion • improve communication • accelerate healing • reduce risk of infection 2. Good exposure to natural lighting • reduce stress • decrease pain • lessen the use of medication 3. Access to natural elements • reduce stress • induce comfort • give relaxing effect 4. Acoustic comfort • induce comfort • increase performance 5. Positive Distraction • enhance human senses	1. Legibility of space • avoid disorientation • give direction 2. Privacy • provide visual privacy • give comfortable auditory privacy

Besides providing spaces for the women and their babies, the newly developed Postpartum Confinement Centre should have facilities to cater to the needs of husbands and other family members. The ideal treatment for postpartum depression mothers is the one that involves a support system from their family. According to Lynn (2019), mothers need to have their support system throughout their journey after giving birth because interaction with friends and family effectively reduces depression compared to being alone to undergo the agony.

3.0 RESEARCH METHODOLOGY

This research was conducted using a qualitative approach, where precedent studies of postpartum confinement centres were analysed and compared via table research to generate spatial requirements for the effective rehabilitation of postpartum depression women. It is found that not all existing postpartum confinement facilities are called confinement centres. The names varied from just a healthcare building to Rejuvenation Hub.

In this research, three (3) precedent studies (PS) had been chosen as units of analysis to represent the needed building typology, a Post-partum Confinement Centre. The preferred facilities are Kimporo Rejuvenation Center (PS1), Best Month Centre (PS2), and LYC Healthcare (PS3). All the precedent studies are located in the Klang Valley, Malaysia. Only a few precedent studies are available in the Malaysian context because the country has not had a very complex facility specially built for postpartum depression women, and the provision of such facilities is considered new.

Besides the analysis of precedent studies, this research also had interviews of experts. Two (2) interviewers were chosen based on the interviewers' expertise in dealing with postpartum depression women. The interviewers are psychiatrists who have had experience working with postpartum depression women in a Malaysian local hospital. The interview sessions were designed using a semi-structured technique, where questions were formulated to be inclined to the spaces needed for postpartum depression women. The interviews sessions were conducted to get the primary data on the characteristics of spaces that would benefit the healing of postpartum depression women. Furthermore, the collected data would enable researchers to outline the relevant spaces to reduce the effects of postpartum psychological and physical problems among postpartum depression women.

4.0 RESULTS

4.1 Analysis of Precedent Studies

There are few established Post-partum Confinement Centre in Malaysia because the concept that postpartum mothers need such recognised facilities is considered new. Often, new mothers are cared for at home, by their family members only. Hence, this is the reason why finding precedent studies for this research was pretty challenging. Hence, the difficulty in observing existing precedent studies justified why Malaysia is undoubtedly in need of this research. Based on the analysis of the three (3) precedent studies of postpartum confinement centres, researchers could identify required spaces for the needed facilities. The chosen precedent studies were Kimporo Rejuvenation Center (PS1), Best Month Centre (PS2), and LYC Healthcare Center (PS3). Both PS1 and PS3 are located in Kuala Lumpur, Malaysia, whilst PS2 is located in Shah Alam Selangor, Malaysia. For security reasons, layout plans for the precedent studies are not provided. Figures 1 and 2 show the babies' room at PS2 and an exercise room for new mothers at PS3.

Fig.1: Babies' room at PS2
(Source: Best Month Centre, 2020)

Fig.2: Exercise room for new mothers at PS3
(Source: LYC Healthcare Center, 2020)

Researchers identified eighteen (18) relevant spaces, and they were classified into three (3) significant groups: Mothers' Facilities (MF), Babies' Facilities (BF) and the General Public Spaces (GPS). The identified spaces were also observed via photographs, based on the types of treatment the spaces might serve for postpartum depression women: physical or psychological treatments. Table 3 shows the tabulated spaces within the formulated categories, with suggested treatment.

Table 3 Classifications of Available Spaces for Postpartum Confinement Centre

No.	Category/ Room	PS 1	PS2	PS3	Treatments
A	Mother's Facilities (MF)				
1.	Deluxe room	√	x	√	Both
2.	Premium Room	√	√	√	Both
3.	Vit Suite (2 attached spaces)	x	√	x	Both
B	Babies' Facility (BF)				
4.	Baby's Rooms	√	√	√	Psychological
5.	Nursery	√	√	√	Psychological
6.	Bathing Room	√	√	√	Physical
C	General Public Spaces (GPS)				
7.	Postnatal Spa Massage Room	√	√	√	Physical
8.	Hair Salon	√	√	x	Physical
9.	Bathing Spa	√	√	x	Physical
10.	Foot Massage Room	x	√	x	Physical
11.	Kitchen	√	√	√	-
12.	Lounge	√	√	√	Psychological
13.	Multi-purpose Room	√	√	√	Psychological
14.	Dining Area	x	√	√	Psychological
15.	Security Room	√	√	√	-
16.	Image Consultation Room	x	√	x	Physical
17.	Yoga/exercise Space	x	√	x	Psychological
18.	Dance Space	x	√	x	Physical

Based on the spatial analysis of the three (3) precedent studies, it was found that all three (3) precedent studies had almost similar spaces for the confinement of women with postpartum depression. PS2 had the most spaces catered for both psychological and physical treatments of the occupants. 8 out of 18 spaces (44%) in PS2 were dedicated for psychological treatment, whilst 9 out of 18 spaces (50%) were designed for physical treatment of postpartum depression women. In comparison, PS1 had only six (6) spaces (33%) dedicated to psychological treatment and 6 (33%) designed for physical treatment. For PS3, 7 out of 18 spaces (39%) were dedicated for psychological treatment, whilst 4 out of 18 spaces (22%) were designed for physical treatment of postpartum depression women. Hence, all three precedent studies had considerable quantities of spaces that provide psychological and physical treatments. Figure 3 shows the comparative percentage of the number of spaces for psychological and physical treatments.

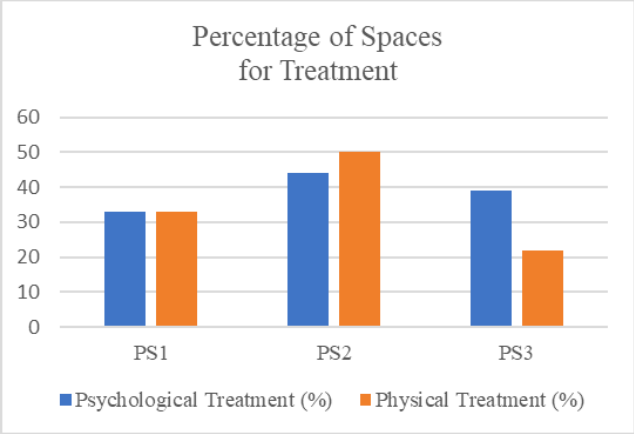

Fig.3: Comparative percentage of spaces for psychological and physical treatments.

4.2 Analysis of Interview

Data from the interview had been transcribed and coded to confirm the reliability of the research finding from spatial analysis. Based on the interview sessions, it was found that the interviewers agreed that all the spaces mentioned in the spatial analysis are relevant and needed for the new development of confinement centres for postpartum women. However, the interviewers believed that the listed spaces should be detailed with certain functional characters, primarily to accommodate psychological treatment needs for women with postpartum depression. In addition, a few additional spaces should also be provided to cater for better psychological and physical treatments (Lynn, 2019; and Abd. Rahman, 2019).

For psychological treatment, the interviewers emphasised having a support system from family members; therefore, all existing rooms and additional rooms should have facilities to accommodate visits from husbands and family members. It is essential to include the husband, family members, and friends in programmed activities as part of psychological treatment. Besides, having spaces and facilities that encourage interaction among inmates were also urged (Lynn, 2019; and Abd. Rahman, 2019).

Meanwhile, for Physical Treatment, the interviewers suggested that the centre should have

additional facilities, like a swimming pool, beauty parlour and gymnasium, so that the postpartum depression women could unwind themselves. Table 4 shows the spatial requirement with functions based on the interviewers' perception. Based on the analysis of precedent studies and interview sessions, this research proposes a Schedule of Accommodation (SOA) for the Post-partum Confinement Centre. Figure 4 shows the formulated spatial requirements for any new confinement centre.

Table 4 Spatial requirement concerning functions

Treatment	Existing Space	Suggested Additional Space	Function
Psychological Treatment	Mother's Room		-In terms of support system, the mother room need to be equipped with baby facilities. The design of the space also needs to cater for extra person, so that husband or other family members could stay in case needed
	Babies' Room		-The babies' room needs to have a private nursery room for mother-baby bonding -The room should also have a lounge, or adjacent to, for family members to give support.
	Lounge Area		-This area needs to be surrounded by other facilities to ease interaction among the depressed women and family members.
		Counselling Office	-The counselling office is also needed to accommodate grouping as part of the therapy session
Physical Treatment	Spa (yoga, massage and bathing)		- For physical therapy session
		Swimming Pool	- For physical therapy session
		Beauty Parlor	- For image therapy
		Gymnasium	- For physical therapy session

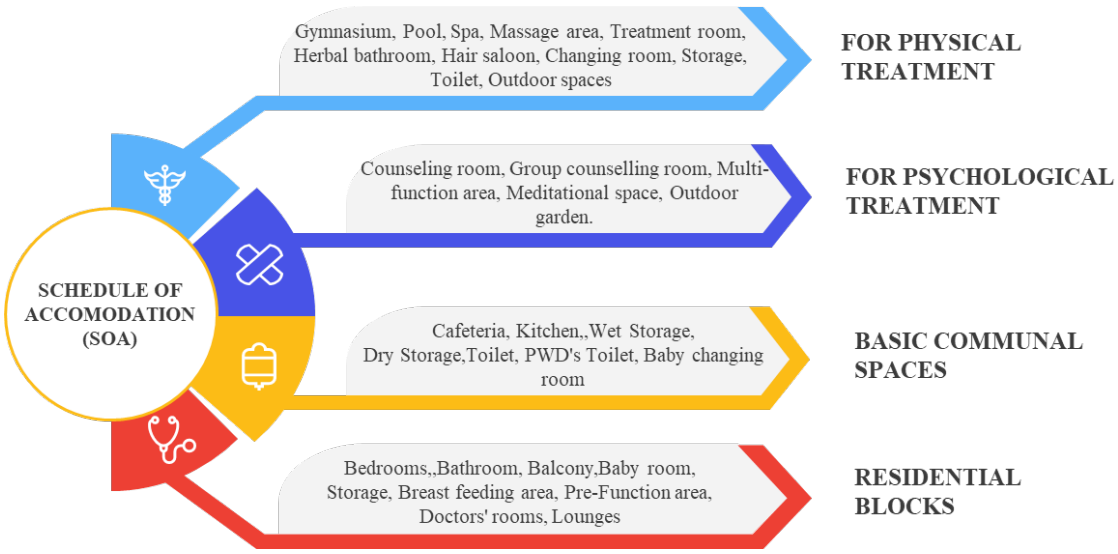

Fig. 4: Proposed Schedule of Accommodation (SOA) for Post-partum Confinement Centre

5.0 CONCLUSION

This research has identified the needed spaces for developing a Post-partum Confinement Centre for women with postpartum depression. The precedent studies have also enabled researchers to have a guide to designing a building of the same typology. However, the outlined spaces in Table 3 and Table 4 may serve as the minimum requirement for developing an architectural design brief of the intended Postpartum confinement centre. Further research on supportive systems, like programmed activities and adjacency of spaces, is necessary for an optimum requirement. In addition, there is a need to integrate healing design parameters with building design to get an effective architectural solution for postpartum women with depression.

This research has also confirmed that the process of healing and reducing the impact of negativity among postpartum depression women are not only dependent on the physical spatial development, but the most crucial aspect of being considered is the support system from family members and friends. The information generated from this research may benefit all stakeholders in building design and development. People like architects, engineers, policymakers, planners, designers, health personnel, academicians, and students could understand better how to design a conducive environment in a Postpartum Confinement Centre.

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