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Innovative Office Lactation Pods: Championing Gender Equality and Inclusivity in Indonesia's Workplace

Ruang Laktasi Kantor yang Inovatif: Upaya Mewujudkan Kesetaraan dan Inklusivitas Gender di Tempat Kerja Indonesia

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ABSTRACT

Working mothers often face challenges at work due to the lack of adequate, comfortable, and standardized breast pumping facilities, forcing them to express milk in unsuitable places like bathrooms, storage rooms, or under desks. This research explores the adaptation of traditional lactation rooms into lactation pods in Indonesian office settings, focusing on mothers returning to work after maternity leave. Using a user-centered design approach, this qualitative study aims to promote understanding and serve as a medium for advocating gender equality in the workplace. The research highlights the importance of creating an inclusive environment for female employees and empowering women at work. The outcome is a conceptual design (CD) that offers a sustainable solution to support breastfeeding-friendly offices while enhancing the productivity of working mothers.

INFO ARTIKEL

Kata kunci:

pod laktasi, ibu pekerja, desain inklusif, user-centre design, kantor

ABSTRAK

Ibu bekerja kerap menghadapi kendala di tempat kerja karena fasilitas laktasi yang kurang memadai, nyaman, dan sesuai standar sehingga mereka terpaksa memompa ASI di ruang-ruang tidak layak seperti meja kerja, ruang istirahat, musala, gudang, atau kamar mandi. Penelitian ini bertujuan untuk melakukan adaptasi ruang laktasi menjadi pod laktasi di tempat kerja. Fokus utama dari penelitian ini adalah para ibu yang kembali bekerja di kantor di Indonesia setelah cuti melahirkan. Penelitian kualitatif ini akan dilakukan dengan menggunakan metode User-Centered Design. Pendekatan ini bertujuan untuk meningkatkan pemahaman dan sebagai media promosi yang memperkuat kesetaraan gender bagi karyawan di kantor. Penelitian ini penting dilakukan untuk menciptakan tempat kerja yang inklusif bagi karyawan perempuan dan menjadi katalisator pemberdayaan perempuan di lingkungan kerja. Temuan penelitian ini menghasilkan sebuah inovasi desain berupa desain konseptual (CD) untuk meningkatkan produktivitas ibu bekerja yang berkelanjutan dan solusi dalam mendorong kantor ramah ASI.

Introduction

Gender equality has become one of the main topics in social and economic development in Indonesia. This is also stated in Indonesia's Sustainable Development Goals (SDGs), Goal 5, which is committed to achieving gender equality and empowering women (Ministry of PPN, 2020). Furthermore, increasing participation of women in the workforce is a crucial indicator in driving inclusive and sustainable economic growth. However, offices in Indonesia are not accommodating to breastfeeding. This can be seen from the results of the National Socio-Economic Survey of the Central Statistics Agency (BPS), which shows that children who receive exclusive breastfeeding from working mothers are lower, namely 69.48%, compared to mothers who do not work, namely 75.92% in 2023 (Santika, 2023).

The problem now is that female employees, especially working mothers, often face urgent challenges related to supporting facilities in the workplace, one of which is the lack of comfortable and standard breast pumping space. Many of them pump breast milk in uncomfortable places in the office, such as under their desks, in shared break rooms, in office prayer rooms, in warehouses, and even in bathrooms. This can increase stress for working mothers and, furthermore, reduce or even eliminate breast milk production. In fact, as a form of corporate responsibility towards female workers, user-friendly breast pumping rooms are part of the implementation of inclusive policies in the era of gender equality. Previous research found that breastfeeding rates for working mothers decreased significantly after returning to work due to lack of support from the workplace (Tsai, 2022). Meanwhile, the reality in Indonesia shows that many offices, both in the public and private sectors, still do not provide such facilities, or if they do, they are often inadequate in terms of design, privacy, and accessibility (Fernandes et al., 2016; Kusumaningsih, 2020; Yetti, 2018).

Lactation pods, or portable lactation rooms, offer an innovative solution to meet the needs of breastfeeding mothers in the modern work environment. The design of these pods not only provides a hygienic and comfortable private space but also reflects the company's commitment to inclusivity and the well-being of female employees. The implementation of lactation pods in Indonesia is relevant to global targets such as the Sustainable Development Goals (SDGs), especially SDG 5, which targets gender equality and women's empowerment, and SDG 8, which supports decent work and economic growth.

The purpose of this research is to design a workplace facility that truly supports mothers in expressing breast milk during working hours, while also developing a smart lactation pod that is not only optimal and functional but also comfortable and nurturing within the office environment. This study positions the design of lactation pods as a tangible step toward advancing gender equality and fostering an inclusive workplace that recognizes and integrates women's biological needs within the professional sphere of the modern era. There remains an empirical gap in existing research regarding the necessity and design of lactation rooms. While previous studies have highlighted the importance of providing such spaces, many aspects of lactation room requirements, particularly in the context of pod design, have yet to be explored in depth. Empirical investigation in this area is crucial, as it contributes directly to supporting gender equality and empowering women in the workplace. To date, much of the literature has relied on qualitative approaches and theoretical discourse but has not addressed interior design solutions tailored specifically to the needs of female employees who express breast milk during work hours. Currently, no research has empirically evaluated the design of lactation spaces in the form of dedicated lactation pods, making this study an important and timely contribution.

Since few experts are interested in uncovering this, the design of the lactation room into a lactation pod is an opportunity for further investigation. This research is very important because it investigates how the policy and existence of lactation room facilities continue to this day. What are the most effective interior design factors to improve the comfort and efficiency of female employees when pumping breast milk, and how can the design of a lactation room be adapted into a lactation pod and meet the needs of female employees in the workplace, which ultimately gives rise to a more modern design concept for today's office interiors?

Previous studies have shown that mothers who work in high-quality lactation rooms, such as private, safe, and comfortable spaces for pumping breast milk, can minimize distractions and time spent outside the office, experience less stress, have more positive thoughts in the work environment, find it easier for working mothers to maintain their breast milk pumping schedule, reduce absenteeism due to health problems, and have higher subjective well-being, thus contributing to a more positive work experience in the office (Bech et al., 2022; Hodkinson et al., 2022; van Dellen et al., 2022).

Other studies have found that the implementation of breastfeeding-friendly policies in the workplace is influenced by factors such as work schedule flexibility, availability of lactation services, and previous breastfeeding experience. Additionally, awareness of regulations, use of interventions, workplace culture, and support from supervisors and coworkers can help or hinder the creation of a supportive breastfeeding environment. Unfortunately, while some workplaces are aware of the legal requirements, many have not taken firm steps to support female employees pumping breast milk in the office (Barasinski et al., 2022).

The above study shows the importance of workspace adaptation for female employees who pump breast milk in the office as an inclusive strategy in some work situations. The difference between the two studies lies in the object of research and the media used as a solution, but neither has focused empirically on the innovation of lactation space into a flexible and moveable lactation pod.

In the context of lactation pods as workspaces in offices, the development of gender inclusion in their design plays an important role. The trend of gender role stereotypes in Indonesia is still visible in design and technology, where women are often depicted as weak and dependent (Stumpf et al., 2020). Discrimination against female workers continues to occur, both for those who are married and those who are not, due to the bias against the nature of the subject in the unequal world of global capitalism (Hartati, 2023; Hermanto, 2022). The principle of non-discrimination requires that women, including those who are pregnant or may become pregnant, must be considered for employment on an equal basis with others, regardless of gender (UNICEF, 2022).

The gender-inclusive approach is an important principle in understanding users (user-centered design) to determine appropriate design solutions based on their mobility needs. Gender-inclusive design is an effort to design in the context of performative gender and develop gender-equitable design solutions (Stumpf et al., 2020). Gender-inclusive in this study allows users of all genders to participate in tasks with equal capacity (Rukmangadhan, 2019). Other considerations are structural, contextual, and economic needs in addition to specific physiological, psychological, and sociological needs when designing lactation pods in the office (Rosemary Kilmer; W. Otie Kilmer, 2014). So, lactation pods can be a medium for employee communication and ongoing knowledge to support pumping breast milk in the workplace, including in the context of gender-inclusive design for working mothers.

Based on the explanation above, the formulation of the problem is that many workplaces are not inclusive toward working mothers. This can be seen from the lack of lactation rooms or the existence of uncomfortable lactation rooms. Many offices or companies focus more on work results without paying attention to employee welfare, especially the needs of working mothers. In fact, working mothers have the same high spirit as other employees, both women and men. The lack of support for working mothers to pump breast milk in a workplace is one of the causes of gender inequality in the workplace. This condition cannot be allowed to continue, because it will have an impact on the productivity and welfare of working mothers. One solution that can be applied is to create a breastfeeding-friendly environment by providing lactation pods that support the needs of working mothers.

Method

Operationally, the research approach can be elucidated in Figure 1 below.

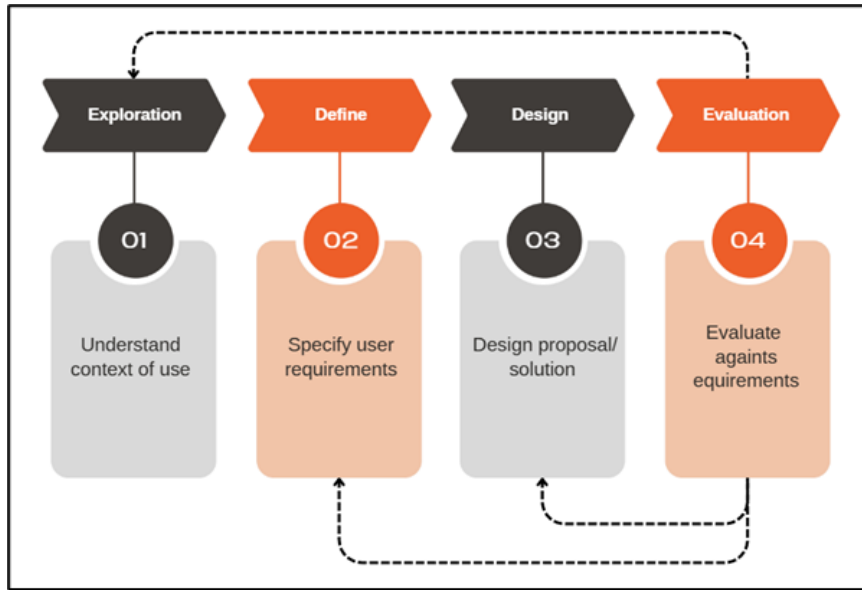


Figure 1 Research stages: Adaptation of User-Centered Design
 Source: Interaction Design Foundation, 2024

This study uses a qualitative descriptive method with a user-centered design method approach from the Interaction Design Foundation to identify relations, emotional interactions, and positive behaviors with the interior attributes of working mothers in the office (Norman, 2016). The study focuses on mothers returning to work after maternity leave. Data were collected through direct observation and interviews with working mothers in government and private offices in Jakarta and Yogyakarta, capturing their real experiences as they resumed work. The User-Centered Design (UCD) method is an approach to design that emphasizes creating solutions that meet the unique needs and abilities of users, involving understanding user challenges, learning from users, and collaborating to develop solutions that effectively address their problems (Norman, 2016). Similar to the design thinking method is understanding the problem and observing user needs (Octavia, 2023). User-centered design has four stages in its design process, namely exploration, definition, design, and evaluation, to achieve significant and sustainable positive change.

1. The exploration stage, used observations, surveys, and in-depth interviews, which will be conducted with working mothers and their workplaces. It focuses on understanding user needs, preferences, and behavior. The research object is about state and private offices in Indonesia. The focus of the study is working mothers who return to office work after maternity leave. The sampling method used is purposive, by taking a sample of 50 working mothers. This sample is based on the consideration that the population of the research object is working mothers (homogeneous) who have just given birth and spend at least 75% of their time at their desks (Lenaini, 2021).
2. Defining stage, which is the stage of problem statement (user-need statement) that can be followed up and is inclusive to working mothers as specific users. Reducing data on observation results to reveal the difficulties faced by working mothers when pumping breast milk and identifying the needs of working mothers for a work area as well as an area for pumping breast milk and inclusive facilities in an office. The statement of working mothers' needs as a success metric before the idea and creation of the lactation pod model begins (Gibbons, 2019).
3. Designing stage (design development), namely formulating the design problems of the Lactation Pod in an office. Creating a solution with inclusive design based on the emergence of new ideas along with the psychological processes of female employees (users) who multitask by pumping breast milk in the office (need), creating a concept and design model for a lactation pod that answers the needs and problems of working mothers (a goal).

4. **Evaluation Stage:** This is the analysis and synthesis of previous stages’ interpretations into a visual model of a lactation pod, with the aim of becoming a reference for future endeavors on smart lactation rooms and their equipment. Finally, it offers a new design in the form of a conceptual design (CD) as a solution to encourage a breastfeeding-friendly office. The adaptation process and how the workspace innovates into a breast pumping room for working mothers while they carry out their duties are discussed at this level.

Results and Discussion

The regulatory framework governing workplace lactation facilities in Indonesia demonstrates comprehensive legal coverage through multiple legislative instruments. Government Regulation No. 33 of 2012 and Minister of Health Regulation No. 15 of 2013 establish clear mandates for lactation room provision and specify detailed facility criteria that employers must meet (Marpaung, 2020).

Explore: Present Lactating Space Facility in an Office

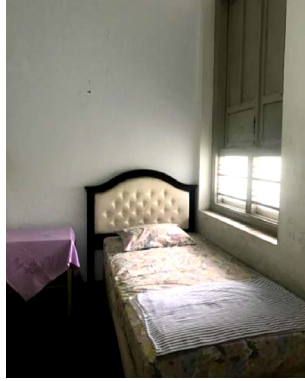
Article 83 of the Manpower Law further reinforces these requirements by explicitly protecting female employees’ rights to breastfeed during working hours (Marpaung, 2020). These legislative provisions create a robust legal foundation that theoretically ensures comprehensive workplace support for breastfeeding mothers across all employment sectors. The regulatory framework reflects Indonesia’s commitment to international standards regarding maternal and child health protection in occupational settings.

Despite this comprehensive regulatory architecture, empirical evidence from survey data and direct observations reveals substantial implementation deficits across both public and private sector organizations. Private sector workplaces in urban areas typically provide designated lactation facilities with adequate amenities, yet these spaces are frequently positioned at considerable distances from employees’ primary work areas, creating accessibility challenges within high-pressure work environments characterized by strict performance expectations. Rural private sector organizations demonstrate even more limited compliance, with minimal lactation facility provision that often fails to meet basic regulatory standards. Public sector offices present the most concerning implementation gaps, as non-health government institutions in both urban and rural contexts frequently lack any dedicated lactation facilities whatsoever. Consequently, female employees are compelled to express breast milk in inappropriate spaces including medical rooms, pantries, workstations, prayer rooms, and even restroom facilities, highlighting the profound disconnect between regulatory intention and workplace reality (see Table I).

Table I The Documentation of the Lactation Room for Office-based Mom

The criteria	State office	Private office
The duration of breastfeeding.	5 to 30 minutes every 3 hours at least.	5 to 30 minutes every 3 hours at least.

Current place to do breastmilk pumping.



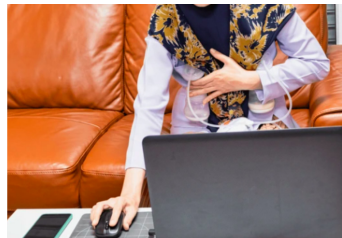
In the medical room.



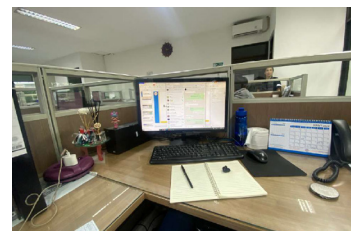
Makeshift cubicle in the pantry.



The lactation room is far from the work desk and even on a different floor.



At the desk.



At the desk.



Under the desk.



In the meeting room.



In the washroom.



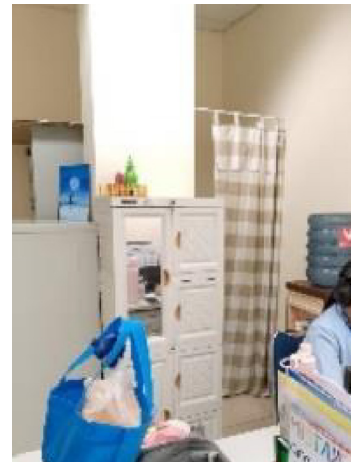
In the washroom.



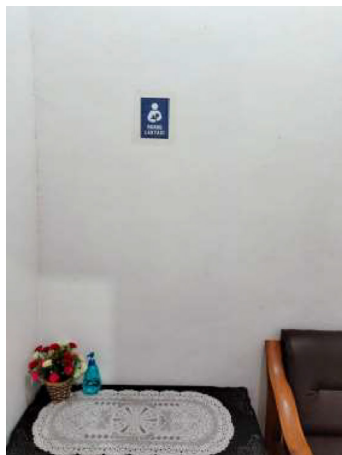
In the prayer room.



At the warehouse.



Makeshift cubicle near the workstation.



The lactation room is away from the work desk (at the edge of the office building).

The space needed to do pumping for office-based mom.

- At the desk
- Private room

- Near the desk
- Hygienic space
- Soundproof space

The implementation of breast pumping facility policies reveals significant disparities between organizational types and demonstrates concerning gaps in comprehensive lactation support. Private sector organizations exhibit relatively higher compliance rates in establishing dedicated breast pumping facilities, reflecting their greater responsiveness to regulatory mandates and employee welfare considerations. In contrast, public sector institutions demonstrate limited implementation of comprehensive lactation policies, with most government offices providing lactation facilities exclusively for visiting mothers rather than their own employees. This selective approach suggests a fundamental misunderstanding of the policy's intended scope and primary beneficiaries within the public sector workforce. The disparity between private and public sector implementation indicates inconsistent policy interpretation and enforcement across different organizational contexts.

The spatial configuration of existing lactation facilities presents additional barriers to effective utilization across both sectors. Both government and private offices consistently locate breast pumping rooms at considerable distances from employees' primary work areas, creating logistical challenges that discourage regular use. This poor spatial planning fails to consider the practical needs of breastfeeding

employees who require frequent and convenient access to lactation facilities throughout their workday. Consequently, many female employees resort to improvised solutions, including expressing breast milk at their workstations using manual pumps concealed beneath their desks. The subsequent storage of expressed milk in shared office refrigerators further highlights the inadequacy of current facility provisions and underscores the need for comprehensive, employee-centered lactation support infrastructure that prioritizes both accessibility and privacy (see Table II).

Table II Physical Condition and Breast Milk Pumping Behavior of Employee

Variable	Type of Workplace	
	State	Private
Age < 30	60%	40%
Above University	80%	90%
Access to use and type of lactation room	No independent space	Some with independent space
Working hours	8 hours / day	8–14 Hours / day and more
Duration of breast pumping	two to three times	two to three times
Breast milk storage	Shared refrigerator	Shared refrigerator <i>Personal cooler</i>
Policy on pumping breast milk	Not yet implemented	Not everything is implemented
Location of lactation room from work desk	There isn't any	Far

Define

The comprehensive methodological approach employed in this study, integrating field observations, documentation analysis, and extensive literature review, provided a robust empirical foundation for determining optimal lactation room specifications and facility requirements. Field observations revealed practical implementation challenges and user preferences that are frequently overlooked in theoretical policy frameworks, while documentation analysis highlighted existing disparities between regulatory standards and actual workplace practices. The literature review contributed evidence-based insights from both domestic and international best practices, enabling the development of contextually appropriate and culturally sensitive facility guidelines. This triangulated data collection methodology ensured that the resulting recommendations are grounded in empirical evidence while remaining responsive to diverse organizational contexts and resource constraints. Based on these synthesized findings, researchers established comprehensive specifications that distinguish between essential equipment necessary for basic lactation room functionality and supplementary amenities that enhance user experience and facility effectiveness for female employees in office environments (see Table III).

Table III List Items of Preferred Lactation Room Qualities in the Office

No	Lactation room quality list item	Female employees' needs
1	Accessibility	<ul style="list-style-type: none"> • Smart lock door • Lactation room sign • Occupied sign • Door viewer
2	Furniture	<ul style="list-style-type: none"> • Sofa • Desk chair • Worktable

3	Pumping facilities	<ul style="list-style-type: none"> • Clothes hanger rack • Room divider • Functional socket • Paper towels • Wet wipes • Garbage can • Mirror • Cushions on sofa or chair
4	Relaxation	<ul style="list-style-type: none"> • Soundproof Panels
5	Decoration	<ul style="list-style-type: none"> • Artificial plants or flowers • Real plants or flowers • Colored wall
6	Windows and lighting	<ul style="list-style-type: none"> • Windows • Artificial light • Dimmer • Ambient lighting
7	Temperature control	<ul style="list-style-type: none"> • Air conditioning • Exhaust fan

The above data findings show a list of needs that need to be adjusted for female employees who pump breast milk in the office. The quality of the breast pumping room is related to the comfort and perception of female employees who pump breast milk in the workplace. As in previous studies, the increasing number of mothers combining work and breastfeeding successfully offers social benefits such as increased choices of pumping breast milk among female employees upon returning to work (van Dellen et al., 2021, 2022). In addition, considering the needs of female employees, another issue that needs to be considered is the condition of the office as their workplace. From the observations, it was found that the absence of a lactation room was 96% due to lack of space, and it was impossible to provide a lactation room in all departments in an office (Brugaillères et al., 2024; Fernandes et al., 2016; Jiravisitkul et al., 2022; Muhammad Roslan et al., 2022). Thus, readjusting the facilities for pumping breast milk, which used to be in the form of a permanent room, into a pod for pumping breast milk to support the productivity of female employees in the office is important to do. Therefore, it can be concluded that the problems of lactation room design in the office for female employees who have to pump breast milk in state and private offices in Indonesia are:

1. Breast pumping facilities are incomplete, cannot be used while working, and have no privacy for pumping breast milk.
2. Lack of space and limited funds for office space extension.
3. The company’s objection to providing lactation rooms in all sections/departments at the workplace.

Design Development

The design development phase represents a critical ideation stage where empirical findings from previous research phases were synthesized to generate conceptual solutions that address identified user needs and organizational constraints. A comprehensive mind mapping exercise was conducted to systematically organize user requirements and establish design priorities, ensuring that the resulting concept would effectively address the practical challenges faced by breastfeeding employees in contemporary workplace environments. The research revealed that female employees frequently resort to inappropriate spaces for breast milk expression, including workstations, prayer rooms, restrooms, and storage areas, which necessitates extended absences from their primary work responsibilities and compromises both hygiene and privacy standards. These findings informed the development of a design concept that prioritizes spatial efficiency and functional integration, proposing lactation facilities that can accommodate both milk expression and work-related activities while maintaining proximity to employees’ primary workstations.

Given the widespread absence of dedicated lactation infrastructure in existing office buildings, the research proposes an innovative lactation pod concept featuring modular, non-permanent design characteristics that ensure mobility and adaptability across diverse workplace configurations. (Figure 2).



Figure 2 Office Lactation Pod Mind Map

Source: Personal documentation, 2024

With this visual thinking approach, various design aspects such as comfort, cleanliness, ergonomics, aesthetics, technology, accessibility, and additional features can be detailed more clearly. In helping to create a holistic and functional Lactation Pod design, there are 7 aspects that are developed, namely:

1. Theme Concepts

The lactation pod design will use a modern style with biophilic design to present a calm and natural atmosphere and will be adjusted to today’s office nuances. One of biophilia’s components is design, such as a combination of colors and representations of nature, such as naturalistic ornaments, realistic paintings, and reliefs, which can encourage beneficial interactions between humans and nature, to achieve adaptive and healing designs (Ricci, 2021). Integrating natural elements into various office environments has been shown to significantly contribute to relaxation, comfort and reduced stress responses in the autonomic nervous system, and can increase employee sustainability, satisfaction, and productivity in an office (Huntsman & Bulaj, 2022; Ignacio & Shealy, 2023; Khanzadeh, 2024; Shaikh & Sava-Segal, 2024; Yu, 2024).

2. Color and material

The colors that will be used are in accordance with the modern and biophilic concept. Pastel colors such as soft turquoise combined with gray will dominate the design of the lactation pod.

Furthermore, orange will be used as an accent color to generate energy. The materials that will be used are soundproof panels, soft-touch leather and frosted glass with green leaves to provide privacy and modern aesthetics. The soundproof panels are expected to allow working mothers who are pumping breast milk to focus more on working while pumping breast milk and for other employees to not be disturbed by the noise that may be caused by the breast pump. In addition, the materials used are also easy-to-maintain materials.

3. Shape

Modern design is very identical with simple forms. In this study, the lactation pod is designed with a rectangular shape for space efficiency and is easy to place in corners or limited spaces. With an organic shape like rounded corners on all four corners, this design is expected to strengthen the modern image that provides a warm and friendly aesthetic.

4. Pod interior design

There are several features of the lactation pods, such as ergonomic seats, foldable work desks, armrests, and footrests. It has enough space for one person by taking a minimum standard of 135 cm x 120 cm. It has a mirror behind the folding table and artificial windows with green leaf patterns with consideration of a small and sterile space but psychologically comfortable for female employees to pump breast milk. It also has adjustable lighting and special lights for work. Its interior uses soft and soothing colors that are dominant. This compact lactation pod is also equipped with AC and exhaust fans for good air circulation.

5. Pod exterior design

The exterior of the lactation pod has a compact and modular design. It uses soundproof materials and artificial windows with green leaf patterns to increase the privacy and comfort of all employees, especially working mothers who use it. The door is equipped with a door viewer, lactation sign & occupied sign.

6. Accessibility Features

Female employees who pump breast milk have quite a lot of luggage to bring compared to other female employees. In addition to a laptop, they must also bring equipment for pumping breast milk. Therefore, the lactation pod needs to have a smart lock door with an easy-to-use door mechanism as an accessibility feature. This modular rectangular design also makes the lactation pod easy to move.

7. Sustainability Features

The sustainable features of this design are shown from the energy-saving system by using LED lights in its design and using AC with inverter technology. Both technologies have a low power mode and an eco-mode system so that the lactation room can be comfortable and in accordance with user needs.

Evaluation

The evaluation phase constitutes the culminating stage of the design development process; wherein conceptual frameworks are translated into tangible design representations through comprehensive design drawings and three-dimensional modeling. This stage involves the systematic visualization of the previously developed mind map concepts, transforming abstract user requirements and functional specifications into concrete design schematics that illustrate the proposed lactation pod configuration. The design visualization process encompasses detailed technical drawings that specify the spatial arrangement and integration of all essential facilities within the proposed lactation infrastructure. The

evaluation demonstrates that the conceptual design can be effectively accommodated within a compact spatial footprint, with minimum dimensions established at 135 cm x 120 cm to ensure functional adequacy while maintaining space efficiency for diverse workplace environments. This final design representation serves as both a validation tool for the research findings and a practical blueprint for implementation, demonstrating the feasibility of creating accessible, private, and functionally integrated lactation facilities that address the identified gaps in current workplace infrastructure (Figure 3).

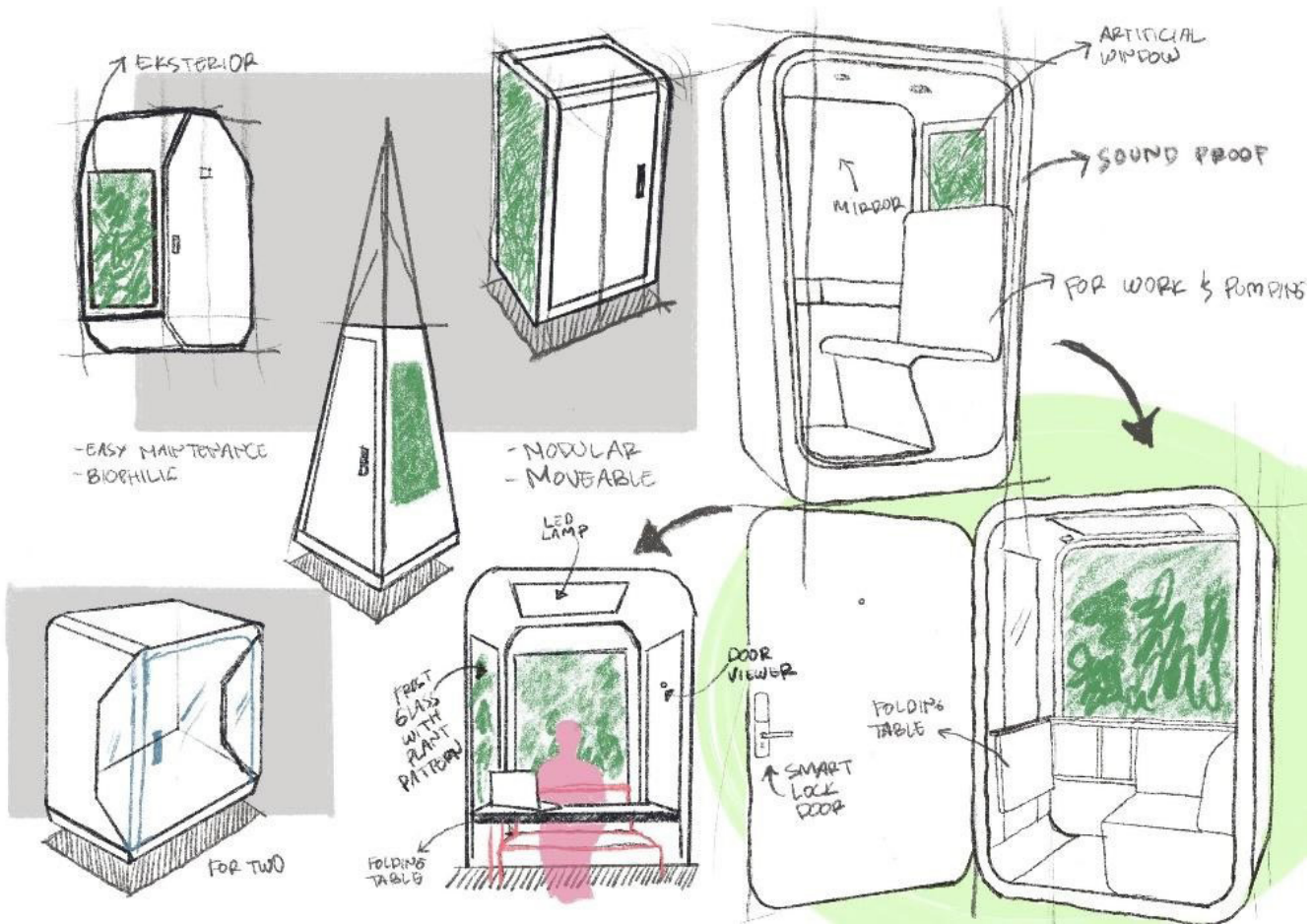


Figure 3 Lactation Pods Process Design Sketches
 Source: Personal documentation, 2024

The seven priorities of lactation pods for female employees who work and pump breast milk are also adjusted to the Regulation of the Minister of Health No. 15 of 2013, article 11, namely: 1) access, 2) furniture, 3) breast pumping facilities, 4) relaxation, 5) decoration, 6) windows and lighting, and 7) temperature control. These priorities are the reference for developing the design into seven design components that need to be considered, including: 1) Theme Concepts, 2) Color and material, 3) shape, 4) Pod interior design, 5) Pod exterior design, 6) Accessibility features, 7) Sustainability features. The last image prepared is the perspective of the lactation pod for female employees in the office in the form of a 3D visual image (Figure 4) and a working drawing of the lactation pod design (Figure 5).



Figure 4 Office Lactation Pod 3D Visual Image for Female Employees
 Source: Personal documentation, 2024

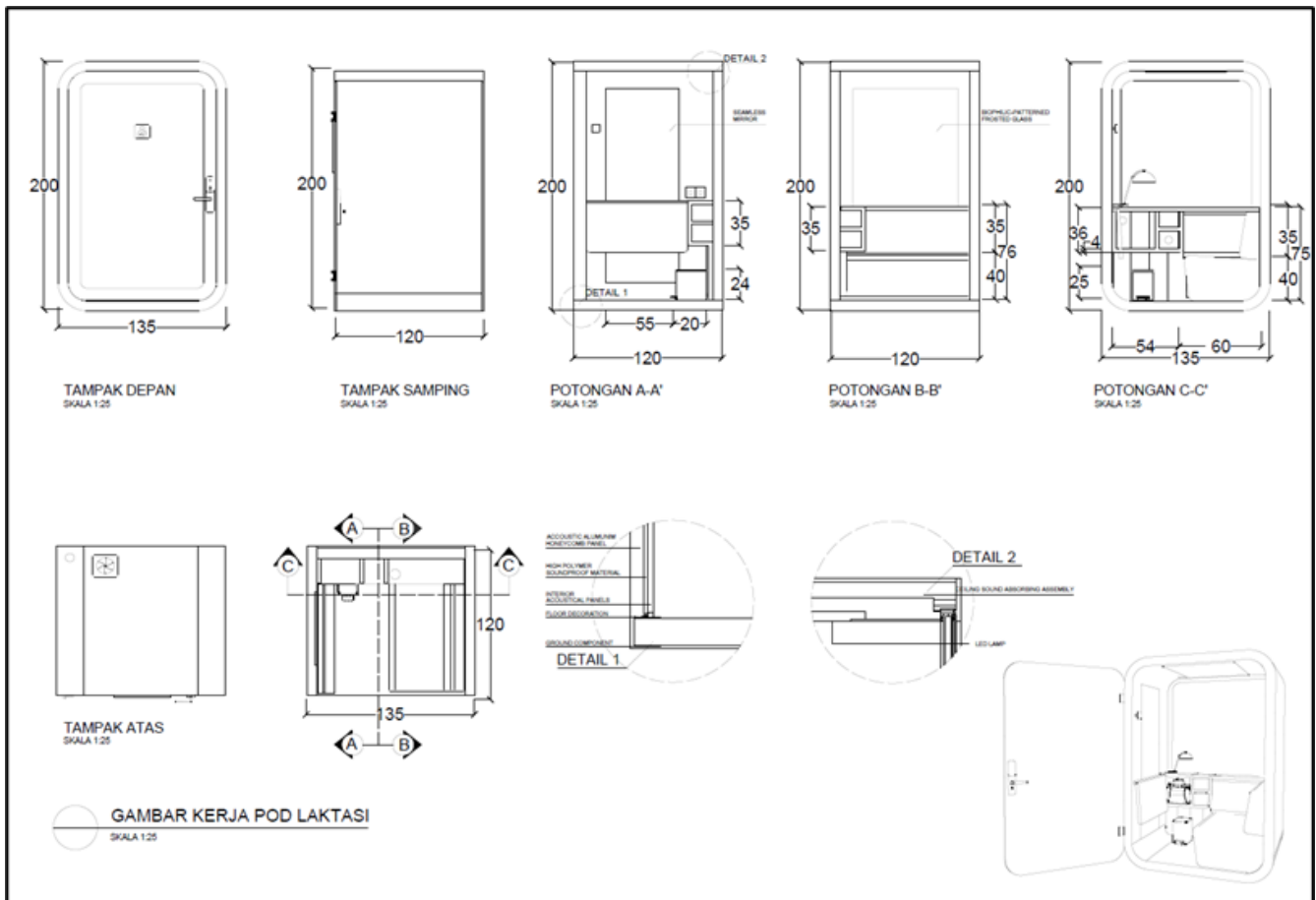


Figure 5 Office Lactation Pod Detail Engineering Design
 Source: Personal documentation, 2024

Conclusion

The study focuses on the importance of workplace changes for women returning to work after maternity leave, particularly in relation to the need to breast pump. Changes in women's behavior after maternity leave require changes in the workplace. This paper explains how to convert the lactation area into a

lactation pod that can meet the needs of working mothers. Lactation pods are an important innovation to create inclusive workplaces for female employees at an era of gender equality and support the Sustainable Development Goals (SDGs) in Indonesia, Goal 5 for gender equality and women's empowerment (Bappenas, 2017). Research indicates that lactation pod designs with comfort and efficiency features, such as the isolation of small spaces from noise, create a safe, relaxing, and comfortable atmosphere and are prioritized. Lactation pods are innovative solutions that support not only pumping milk but also supporting mothers in working to stay productive. However, the study also showed that state and private offices still did not know that working mothers needed to pump their breasts. This shows that more inclusive education and policies are needed to support Indonesian working mothers. By introducing the design of inclusive lactation pods, the working environment can be more welcoming to working mothers, helping them achieve double roles without compromising their personal and professional needs.

Through in-depth interviews and observations at the exploration stage, it was found that there were discrepancies in facilities for female employees in the office, such as the lack of lactation rooms, for female employees who return to work after maternity leave. For female employees in private offices, some are still not facilitated with lactation rooms, and some are applied as they are. Therefore, it is necessary to provide a lactation room by considering several criteria, namely, 1) access, 2) furniture, 3) breast pumping facilities, 4) relaxation, 5) decoration, 6) windows and lighting, and 7) temperature control. These criteria are developed into 7 components of visual thinking by considering users, their needs, and goals in designing lactation pods, including 1) theme concepts, 2) color and material, 3) shape, 4) pod interior design, 5) pod exterior design, 6) accessibility features, and 7) sustainability features. The last image prepared is the perspective and detailed working drawing of the lactation pod for female employees in the office.

The recommendations from this study are the priority order of adjusting the design of lactation pods and their equipment for female employees who pump breast milk in the office and the conceptual design of an inclusive lactation pod to complement it. Smart breastfeeding rooms with a small cabin concept and isolated from outside disturbances make working mothers who use them have more privacy and feel relaxed and comfortable when pumping breast milk at work.

This study has also produced some additional knowledge related to lactation pods for working mothers in the office. Furthermore, it is also known that almost all state and private offices in Indonesia have not implemented a policy of providing lactation rooms in the office, and there are still low support and promotion regarding the importance of pumping breast milk for working mothers. This study also revealed that awareness in state and private office environments regarding mothers who have to pump breast milk is not high enough so that the practices carried out in daily life regarding this are still limited. Answering the questions in the formulation of the research problem, how is the lactation room design for breastfeeding mothers in the office as an effort to realize a culture of inclusivity in the workplace? It can be answered that the design of a lactation room is in the form of a lactation pod, and it is multifunctional. It can be used for female employees to work while pumping breast milk and is one of the right solutions for the work-life balance of working mothers in an office.

Acknowledgement

We would like to thank the working mothers who pumped breast milk for their babies while working in public and private offices in Indonesia for their willingness to be interviewed and provide valuable information in support of this study.

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