Enhancing Parental Engagement at Bougenville Posyandu (Integrated Health Service Post): A Design Thinking Driven Innovation

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DOI: https://doi.org/10.52403/ijrr.20250606

ABSTRACT

Posyandu (Integrated Health Service Post) plays a crucial role in improving child health and reducing stunting rates in Indonesia. However, parental attendance at Posyandu Bougenville, located in RW 15 Kedung Halang, Bogor Utama, remains relatively low, only about 50% of the target participants attend monthly. This study applies a design thinking approach to identify the root causes of low participation and develop innovative solutions. In the empathy and define stages, the core issue identified was a lack of parental awareness regarding the importance of bringing toddlers to Posyandu. The ideation phase produced several ideas: collaboration with local neighbourhood association (RW), use of WhatsApp groups for information dissemination, and leveraging social media platforms such as TikTok and Instagram to engage the community. In the prototype stage, a low-fidelity prototype of the proposed solutions was developed. While the prototype has been designed, the study is still in progress and requires the testing phase to evaluate parental responses and participation levels. This innovation is expected to improve parental attendance at Posyandu and contribute to minimizing the risk of stunting among children.

Keywords: Posyandu, stunting, design thinking, parental engagement, innovation

INTRODUCTION

Since the year 2000, the United Nations Millenium (UN) has launched the Development Goals (MDGs), which were in effect until 2015. Beginning in 2016-2030, the UN introduces a follow-up global initiative the Sustainable Development Goals (SDGs). As a member state of the UN, Indonesia, along with 192 other countries, has adopted the SDGs as a framework for sustainable development. Indonesian government demonstrated its commitment to the SDGs through Presidental Regulation No. 59 of 2017. The SDGs consists of 17 global goals set by the UN to build a better and more sustainable future for all by the year 2030. One of the core goals of the SDGs is to ensure healthy lives and promote well-being for individuals of all ages. Health and wellbeing are interconnected variables that significantly influence each other within every citizen's life. Therefore, it is the responsibility of the state to guarantee equitable access to healthcare services for all citizens, regardless of age or socioeconomic background.

One of the states supported institutions that embodies the goal of equitable healthcare access is the Posyandu (Integrated Health Service Post). Posyandu functions not only as a site for basic health monitoring but also as platform for community empowerment. Its presence is expected to contribute significantly to reducing maternal and child mortality rates, as well as addressing the prevalence of stunting (Rahman et al., 2023). Stunting refers to a condition in which a child experiences impaired growth, resulting in a weight and height that are not appropriate for their age (Khairani, 2020). issue extends beyond This physical development, as stunted children are more susceptible to illness and may experience delays in brain development and cognitive functioning. Consequently, stunting poses a serious threat to the overall quality of human resources in Indonesia. According to Rahman et al. (2023), the national target for reducing stunting in Indonesia is set at 14% by the year 2024. However, in 2022, the stunting rate remained at 24%. Based on the 2023 Indonesian Health Survey (SKI), the national stunting prevalence was still at 21.5%, indicating a significant gap from the 2024 target. The role of Posyandu is crucial in addressing this issue, as it is expected to monitor child growth and contribute to the reduction of stunting rates among infants and toddlers. In collaboration with local community health centers (Puskesmas), Posyandu is also responsible for implementing preventive measures to combat stunting effectively.

Strengthening the role and function of Posyandu is not solely the responsibility of the government but also requires the active participation of all community components, including volunteer health workers known as cadre (Purnawan et al., 2020). The cadre are selected members of the community who receive training under the supervision of community health local (Puskesmas) to serve as health facilitators. Therefore, enhancing the knowledge and understanding of cadres effective in Posyandu management is essential. Regular training sessions are typically conducted to improve their knowledge, skills, competencies (Sari, 2017). In addition, the

Posyandu environment must be made as engaging and welcoming as possible in order to increase the attendance of parents and children.

To optimize the role of Posyandu as a community-based health institution, it is crucial for parents to consistently bring their children for regular check-ups. This parental involvement forms the central focus of our study. Data from Posyandu Bougenville, located in North Bogor, reveals that out of targeted infants and toddlers, the monthly attendance rate hovers around only 50%. In February 2025, for instance, only 42 children attended representing just 48% of the target. Posyandu services are held only once a month, operating between 08:00 and 11:00 AM. Several factors contribute to the suboptimal attendance rate, including parents' busy schedules, children's restlessness, lack of awareness regarding the importance of Posyandu due to the child's seemingly healthy condition, and limited interest or motivation to attend the sessions. This low attendance rate leads to the absence of important health data for children who do not come to Posyandu, making it difficult for cadre and Puskesmas conduct proper monitoring. children's health data are regularly recorded, those identified as experiencing stunting or other health issues can receive timely interventions. Posyandu can then therapeutic carry out preventive and the provision measures, such as supplementary food, nutritional supplements, medications, health education, counseling, and referrals to higher-level healthcare facilities.

This study is particularly compelling as it seeks to identify the root causes of low parental attendance and develop effective solutions using a Design Thinking approach. Through this approach, a range of creative and human-centered ideas are explored and refined into a promising prototype for implementation. The ultimate goal is to transform Posyandu Bougenville not only into a reliable center for healthcare services

but also into an engaging and empowering space for the local community.

Posyandu is a community-based health

LITERATURE REVIEW

Posyandu

program established in 1984 through a joint initiative of the Indonesian Ministry of Health, Ministry of Home Affairs, and the National Population and Family Planning Board (BKKBN) (Suprapto et al., 2022). According to the Regulation of the Minister of Home Affairs Number 13 of 2024 concerning Integrated Service **Posts** Posyandu (Posyandu), is part community-based institution at the village or sub-district level that serves as a platform for community participation and as a government partner in planning, implementing, and supervising development, as well as improving public services. Posyandu carries out its duties in accordance with minimum service standards in the fields of education, health, public public works, housing, peace/public order/community protection, and social. In the field of health, Posyandu plays a vital role in supporting activities such as encouraging community visits to Posyandu for target groups including mothers, infants, toddlers, preschool-aged children, and the elderly; providing health and nutrition education for all age groups; conducting early detection of potential health problems; referring at-risk individuals to village-level health facilities or community health centers (Puskesmas); monitoring family compliance accessing basic health services. undergoing treatment for conditions such as hypertension, diabetes, tuberculosis, and mental health disorders. as well maintaining household environmental and hygiene; ensuring access to immunization services, vitamin Α supplementation, and iron tablets in accordance with applicable regulations. These tasks are carried out by Posyandu cadres who are members of the local community.

Design Thinking Model

According to Brown et al. (2009), Design Thinking is a process that combines deep and human-centered insights to develop prototypes focused on the needs of users whether constituents or consumers, with the aim of going beyond assumptions to generate effective solutions. The Design Thinking framework is divided into five stages:

1. Empathize

This stage involves exploring experiences, emotions, and contexts of the target individuals. It requires placing oneself in the position of others to deeply understand their needs, typically through interviews and direct observation. A commonly used method during this phase is the empathy map, which helps uncover user insights. The ultimate goal is to design solutions that are genuinely meaningful and beneficial to users (Kelley & Kelley, 2013).

2. Define

In this stage, the research team analyzes and synthesizes data collected through observations and interviews. The main objective is to formulate a clear problem statement based on the actual needs and expectations of the target users. This problem statement guides the ideation and solution development processes that follow.

3. Ideate

This stage encourages open-ended brainstorming to produce as many ideas as possible, without initially limiting them by feasibility or technical constraints. The aim is to foster innovation by allowing freeflowing creativity (Kelley & Kelley, 2013). Common brainstorming techniques used in include mind phase mapping, brainwriting, and the "worst possible idea" approach, all of which are designed to stimulate divergent thinking. During the ideate phase, researchers collaborate to explore a wide array of possible solutions aligned with the previously defined problem statement (Brown, 2009). This phase marks a critical transition from understanding the problem to developing actionable ideas. Ultimately, from the various concepts

generated, one idea will be selected as the most suitable and relevant to address the identified issue, forming the basis for subsequent prototyping and testing stages.

4. Prototype

The Prototype stage involves transforming the selected idea into a tangible, preliminary version of the proposed solution. The concept developed during the 'ideation' phase is translated into basic prototype, this could take the form of a sketch model, or a minimal viable product (Brown, 2009). This phase is designed to create a representation that can be tested in real-world contexts. By prototyping, researchers can observe how the idea functions practically and uncover potential flaws or unforeseen challenges (Kelley & Kelley, 2013). The prototype is then presented to users to gather feedback and insights, which are essential for refining and improving the final design.

5. Test

The Test phase involves trial implementation of the prototype with target users. User experience plays a critical role in providing constructive feedback informs further evaluation and refinement of the prototype. This stage enables researchers to assess whether the developed solution aligns with user expectations or requires additional improvement. Feedback obtained during testing serves as a basis for enhancing the design or making necessary modifications to better meet user needs. Through this iterative process, the research remains grounded in the principles of Design Thinking, ensuring that the final solution effectively addresses the identified problems.

Motivation

According to Cook & Artino (2016), motivation is described as the process that triggers and maintains actions aimed at achieving specific goals. The Great Dictionary of the Indonesian Language (2016) defines motivation as an internal drive. whether conscious or unconscious, that compels an individual to take action in pursuit of a particular purpose.

Ryan & Deci (2000) explained that there are types of motivation: intrinsic two motivation and extrinsic motivation. Intrinsic motivation occurs when a person engages in an activity because the activity itself is enjoyable, interesting, or personally satisfying. Extrinsic motivation arises when a person performs an activity to obtain something external to the activity itself (such as gaining a benefit or avoiding punishment)

Posyandu Brand Awareness

Brand awareness refers to the ability of customers to recognize a brand in different contexts and situations, which is reflected in the awareness or achievement of their brand (Kotler & Keller, 2016). As the frontline in maternal and child healthcare services, Posyandu needs to enhance its brand awareness to reach a broader segment of the population. Efforts to increase brand awareness should be carried out in a structured and sustainable manner. involving various stakeholders such as Posyandu cadres, healthcare professionals, and local community leaders. In addition, brand awareness can now also be optimized through social media platforms.

MATERIALS & METHODS

The research methodology in this study adopts the Design Thinking Model approach (Brown et al. 2009) to explore the various issues faced, in order to identify the core problem from these challenges. Subsequently, the researcher discusses several ideas related to solving these issues and selects one idea to be implemented into a prototype. The study focuses on Posyandu Bougenville RW 15, Kedung Halang Subdistrict. North Bogor. Posvandu Bougenville covers 7 RT (neighborhood units) and targets 87 children aged 0-59 months, consisting of 36 boys and 51 girls. The research was conducted from February to March 2025, utilizing both primary and secondary data sources. Primary data was collected through in-depth interviews with three Posyandu cadres: the chairperson, secretary, and treasurer. The researcher also conducted observations during the Posyandu sessions and further gathered information through follow-up discussions with these cadres. Secondary data was obtained from Posyandu documents, relevant theories, articles, and journals.

RESULT & DISCUSSION

Emphasize

The Empathize phase was conducted through in-depth interviews, documents review, and observations. The following steps were undertaken during this phase:

1. In-Depth Interviews

These interviews were carried out two weeks prior to the operation of Posyandu (the last week of February 2025) and during the operational period of Posyandu (the second week of March 2025).

The insights gained from the in-depth interviews were synthesized and translated into an empathy map (Osterwalder and Pigneur, 2010), as illustrated in Figure 1.

SEE

- a. There is a significant amount of paperwork manually completed for reporting purposes to the local Health Center (Puskesmas).
- b. The service desk follows a systematic sequence: registration, measurement and weighing, documentation, counseling, and health services. The flow of visitors is smooth, with no observable queues.
- c. However, during the distribution of Vitamin A in February and August, a higher number of parents with toddlers attend, leading to the emergence of queues.

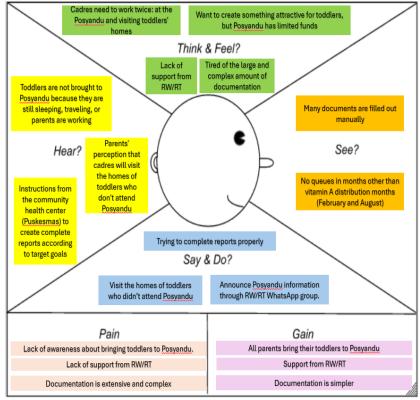


Figure 1. Empathy Map of Bougenville Posyandu

HEAR

- a. Parents are unable to bring their toddlers to the Posyandu due to reasons such as the child still being asleep, the parents working, or being out of town during the
- Posyandu activities. Some also believe that health workers will visit their homes if they miss the Posyandu session.
- b. The Health Center (Puskesmas) has provided guidance to ensure that reports

are filled out accurately and comprehensively, in line with the targeted objectives.

THINK and FEEL

- a. The health workers (cadre) feel overwhelmed as they are required to perform double duties, both staying at the Posyandu and visiting the homes of parents whose toddlers were unable to attend during Posyandu hours.
- b. The health workers have considered creating engaging activities to attract toddlers to the Posyandu, but their limited budget, most of which has already been allocated for Posyandu operations, poses a significant constraint.
- c. The health workers feel a lack of support from the local neighborhood leadership (RW and RT).
- d. The health workers feel exhausted and believe that the administrative documentation required for the Posyandu is excessive, particularly as the deadline for submitting reports to the Health Center (Puskesmas) approaches.

SAY and DO

- a. The health workers must visit the homes of toddlers who are unable to attend the Posyandu sessions in order to collect data on the toddlers who are the target beneficiaries of the Posyandu.
- b. Despite the lack of support from the local neighbourhood leadership (RW and RT), the health workers independently take initiative by announcing Posyandu activities through the RW and RT WhatsApp groups.
- c. Although the administrative documentation is quite complex, the health workers make diligent efforts to complete and submit the reports on time.

PAIN

a. The awareness among parents of toddlers to attend the Posyandu remains low, requiring additional effort from cadres to visit the homes of toddlers

- who do not attend during Posyandu hours. This is necessary as the health workers are required to report comprehensive data in line with the Posyandu's target objectives.
- b. There is a lack of support from the local neighbourhood leadership (RW and RT).
- c. The Posyandu documentation is excessive and complex.

GAIN

- a. The health workers hope that parents will bring their toddlers to the Posyandu during the scheduled activities, so that the health workers do not have to perform double duties.
- b. The health workers hope for support from the local neighbourhood leadership (RW and RT) to encourage parents to bring their toddlers to the Posyandu.
- c. The health workers hope that the Posyandu documentation can be simplified.

2. Document Review

This activity was conducted two weeks before the Posyandu operated, during its operations, and after the activities were completed. The reviewed documents included: the attendance book (to record residents' attendance at the Posyandu), the individual cards (to record data for each toddler), the Maternal and Child Health (KIA) book, the Weight and Height Measurement Cohort, the Posyandu Activity Report (monthly report to the Health Center), the Posyandu Activity Report (periodic report to the village), and other documents that record non-toddler health Since 2024, the Posyandu has expanded its services to not only serve toddlers but also provide integrated health services for the entire population across all life stages, including infants, toddlers, adults, adolescents, and the elderly (Yuliandari, 2023).

Based on the review of the documents, the researcher understood several key points that reinforced the findings from the indepth interviews. First, Posyandu has a total of 7 health workers, with the oldest being 53 years old and the youngest 39 years old. Second, the target number of toddlers and infants for the Posyandu is 87, with the monthly attendance rate is only around 50%. In February 2025, the attendance was just 42 people, which is 48% of the target. Third, documents are numerous and highly detailed.

3. Observation

To provide a comprehensive understanding of the situation and dynamics on the ground, the researcher conducted observations during the Posyandu activities in the second week of March 2025. The results of the observations are as follows: there were no visitor queues, and the Posyandu building appeared unattractive to children due to its plain appearance (lacking decorations such as cartoon images or toys). Additionally, the informational poster about the service flow and Posyandu activities was placed near the restroom, making it less visible to visitors.

Define

This stage is a continuation of the empathize phase. Based on the results from the empathize stage, the researcher identified the main issue faced by the Posyandu: the lack of awareness among parents to bring their toddlers to the Posyandu. The researcher also conducted member checking (Mekarisce, 2020), which confirming the main issues with the health workers to align the perspectives of both the researcher and the cadre. The results of the member checking revealed that both parties shared the same perception regarding the issue of parental awareness. Therefore, this requires an effective solution. considering the limited budget of the Posyandu.

Ideate

During this stage, idea generation is carried out through brainstorming based on the findings from the empathize and define stages. A broad exploration of solutions is conducted to ensure that various innovative possibilities are identified before being filtered and selected as the most appropriate solution. The results of the brainstorming are then visualized in figure 2.

In figure 2, the initial problem and the factors causing parental absenteeism at Posyandu Bougenville can be seen. The causes of absenteeism can be divided into two categories: internal factors within the parents themselves, such as low awareness, busy schedules or other priorities, and lack of motivation; and external factors that arise from the surrounding environment and the Posyandu, including a lack of information, accessibility issues, as well as inadequate comfort and facilities.

Based on these issues, the solutions generated through the brainstorming process include:

1. Collaboration with the Local Leader (RW)

By collaborating with the local RW, especially through the RW leader, socialization about the importance of attending the Posyandu can be carried out through announcements and personal approaches among residents.

2. Creating a Dedicated WhatsApp Group for Posyandu Bougenville

A WhatsApp group can serve as an active communication tool between cadres and parents, providing reminders of schedules and information related to children's health.

3. Sending Schedules in the Form of Attractive Infographics

Providing the Posyandu schedule in an attractive, easy-to-understand design can act as a stimulus to persuade parents to attend the Posyandu.

4. Utilizing Social Media

Creating short, engaging educational content about the importance of Posyandu, testimonials from parents who have attended, and the benefits of attending Posyandu can capture attention and increase public awareness about the importance of participation.

5. Improving the Poster of the Service Flow and Its Placement

Enhancing the aesthetics and effectiveness of the poster placed at the entrance of the Posyandu can help parents better understand the process they will undergo at the Posyandu.

6. Giving Free Balloons for Children

Distributing free balloons as a form of appreciation can serve as an attraction for

children, motivating parents to bring their children to the Posyandu.

7. Providing Drawing Paper and Coloring Tools

Offering coloring activities at the Posyandu can keep children entertained while waiting in line and during the health education session for parents.

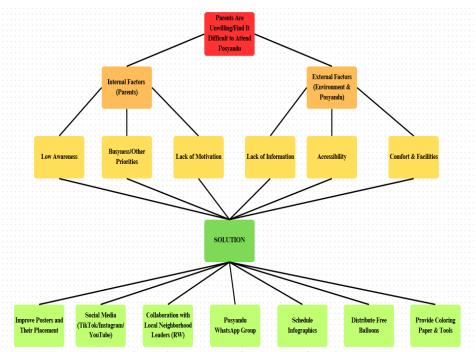


Figure 2. Brainstorming of Posyandu Solution Ideas

Due to the budget limitations at Posyandu Bougenville, which is restricted to IDR 8,000 per child, the selected solutions must be effective and cost-efficient. Based on these considerations, the most suitable and efficient solutions to increase parental attendance at Posyandu are:

- 1. Collaboration with the Local Leader. This method is both effective and efficient, as it does not require additional costs but only coordination and socialization with residents.
- 2. Creating a WhatsApp Group Posyandu. If well-managed by cadres, this method incurs no cost and offers a relatively short time efficiency for communication and reminders.

3. Establishing Social Media Accounts on TikTok and Instagram. These accounts could attract more people to Posyandu and strengthen its popularity if well-managed. Additionally, social media can open opportunities for sponsorship from companies running CSR programs through the Posyandu.

Prototype

This phase focuses on developing initial models of the chosen solutions, enabling stakeholders to better understand their potential effectiveness and feasibility before advancing to broader implementation or testing. The prototype developed is a Low-Fidelity Prototype, which includes simple, accessible.

representations of the proposed interventions. These may take the form of visual mock-ups, sample WhatsApp group content, and outlines of potential social media posts, providing an early-stage preview of how each solution could be applied in the real-world setting of Posyandu Bougenville:

1. Collaboration with Local Neighbourhood Leaders (RW)

The collaboration aims to facilitate the dissemination of information regarding Posyandu activities directly to residents. The workflow of RW Collaboration can be visualized in figure 3.

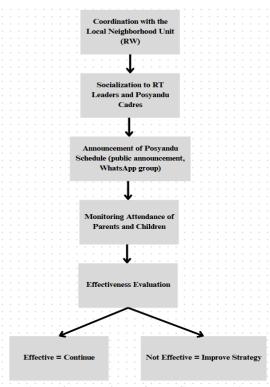


Figure 3. Workflow of RW Collaboration

The workflow in figure 3 demonstrates that the collaborative model will be executed through coordination, socialization, and announcements. These activities will then be evaluated to assess their effectiveness. The primary process in collaborating with the RW can be broken down as follows:

- a. Coordination with RW → Organize a meeting with the RW Chairperson to present the objectives and plans to improve parent attendance at Posyandu.
- b. Socialization with RT and Posyandu Cadres → RW passes on the information to the RT Chairperson and Posyandu cadres to discuss strategies for disseminating the information.
- c. Announcement of Posyandu Schedule
 → The RT Chairperson and Posyandu

- cadres communicate the Posyandu schedule through "woro-woro" (public announcements via local RW/RT speakers), WhatsApp groups, and word of mouth.
- d. Monitoring Parent Attendance → On the day of the Posyandu session, parent attendance is monitored to evaluate the effectiveness of this method.
- e. Evaluation and Adjustment of Strategy

 → If attendance remains low, an
 evaluation will be conducted, and the
 communication strategy will be adjusted
 accordingly.

The advantages of this prototype include the fact that it incurs no additional costs, is easy to implement with effective coordination, and can reach a large number of parents

through the RT and RW networks. However, if socialization efforts are deemed insufficient, a more personalized approach by Posyandu cadres can be employed by visiting households. Through this system, it is hoped that parent participation in Posyandu activities will increase without placing undue strain on the limited budget.

2. Establishing a Dedicated WhatsApp Group for Posyandu Bougenville

This prototype is expected to streamline the flow of information and improve community engagement in Posyandu activities. The key activities carried out are as follows.

a. Creation and Management of the Group: Posyandu cadres initiate and administer the group, ensuring only relevant

- members (parents of toddlers, health workers, cadres) are included.
- b. Regular Reminders and Updates: Cadres send timely reminders about upcoming Posyandu schedules, requirements (e.g., bringing KMS books, immunization cards), and any changes to the event.
- c. Health Education Content: Short, engaging messages, infographics, or videos are shared periodically to educate parents on child health, nutrition, and the importance of routine check-ups.
- d. Interactive Engagement: The group allows two-way communication where parents can ask questions, provide feedback, or share their experiences.
- e. Monitoring Engagement: Admins periodically monitor group activity to assess responsiveness and make improvements as needed.



Figure 4. WhatsApp Group Prototype

The establishment of a WhatsApp group for Posyandu offers several notable benefits. First, it incurs no additional financial cost and only requires effective management by Posyandu cadres. Moreover, its efficiency in terms of time and space allows for the rapid dissemination of information without the

need for face-to-face meetings. Through regular schedule reminders shared within the group, parental participation is expected to increase. The platform also enables twoway communication between cadres and parents. This interactive feature not only promotes a sense of inclusiveness but also strengthens the relationship between health service providers and the community. Furthermore, all shared materials such as announcements, schedules, and health information are archived within the group, providing a well-documented and easily retrievable record for future reference.

3. Establishing TikTok and Instagram Accounts for Posyandu Bougenville

Khanom (2023) explained that nowadays, social media has become an inseparable part of people's lives. It plays a significant role in communication and offers substantial benefits in the field of marketing. By leveraging popular platforms such as TikTok and Instagram, Posyandu Bougenville can enhance public engagement, raise awareness among parents about the importance of regular visits to Posyandu, and strengthen its community presence and positive image.



Figure 5. Social Media Prototype

The envisioned activities for Posyandu Bougenville's social media presence include:

- a. Sharing short, engaging educational content on child health, nutrition, and growth monitoring.
- b. Posting testimonials from parents who regularly attend Posyandu, showcasing their positive experiences and benefits received.
- c. Creating infographics and reminder content about schedules, services offered, and tips for parenting and child development.
- d. Featuring behind-the-scenes glimpses of Posyandu activities to build transparency and emotional connection.

e. Utilizing trending sounds and formats on TikTok to increase reach and visibility among local parents, particularly younger mothers.

By maintaining a consistent and creative online presence, Posyandu Bougenville is expected to not only enhance awareness and participation, but also potentially attract sponsorship through support or local businesses programs from organizations that resonate with its mission. In addition to incurring no additional costs, with the right strategy, social media, particularly TikTok and Instagram can serve not only as an effective information dissemination platform, but also as a tool to attract greater community participation, enhance the public image of Posyandu, and potentially open doors for sponsorships to ensure the sustainability of maternal and child health programs.

By developing the three selected low-cost prototype solutions outlined above, implementation can be tested on a small scale before wider adoption. The next stage in the Design Thinking process is 'testing', in which each solution's effectiveness will be assessed based on parental response and participation in Posyandu Bougenville activities.

However, in this study, the development phase is still limited to the low-fidelity prototyping stage and has not yet progressed to full-scale testing. These three proposed prototypes are intended for initial trial implementation to evaluate their potential effectiveness and inform future improvements.

CONCLUSION

This study aimed to improve parental attendance at Posyandu Bougenville through a Design Thinking approach. The findings reveal that the primary factors contributing to low attendance include limited awareness, competing priorities, lack of motivation, and insufficient information and appeal of the Posyandu itself. Through the structured stages of Design Thinking, this study sought to develop and identify effective, budget-conscious solutions.

In the Empathize and Define stages, the research uncovered in-depth insights into the challenges faced by both Posyandu cadres and parents of young children, particularly the issue of low parental attendance. In the Ideate phase, several solutions potential were generated, including collaboration with the RW (neighborhood association), the creation of a dedicated WhatsApp group for information dissemination, and the use of social media platforms such as TikTok and Instagram to engage a wider audience.

Although these solutions have been developed into low-fidelity prototypes, this study remains in the development stage and has not yet progressed to the Testing phase.

The next critical step involves evaluating the proposed solutions by implementing them on a small scale and assessing their impact based on parental response and participation rates. This process will allow for a more objective measurement of effectiveness before broader implementation.

With proper implementation and rigorous testing, it is anticipated that the innovations developed in this research will significantly increase parental attendance at Posyandu Bougenville. Consequently, this would enable more optimal delivery of child health services and contribute to reducing the risk of stunting in the community.

Declaration by Authors Acknowledgement: None **Source of Funding:** None

Conflict of Interest: No conflicts of interest declared.

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How to cite this article: Fitri Angraini, Nabianca Amanda Satria, Rahmat Kahfi Ardani, Asep Taryana. Enhancing parental engagement at Bougenville Posyandu (integrated health service post): a design thinking driven innovation. *International Journal of Research and Review.* 2025; 12(6): 49-61. 10.52403/ijrr.20250606
