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Exploring the Acceptability Of An Online Systematic and Structured Consultation Management Service For Women's Health In Indonesia: A Phenomenological Qualitative Study.

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ABSTRACT

Background: Since Indonesia has been dealing with COVID-19 since 2020, accessing health care providers has become a problem, especially for vulnerable groups, such as women and children. In this case, 'Hay Bidan' a structured and systematic online maternal care providing teleconsultation via WhatsApp, became one of strategies to tackle this issue. Nevertheless, patient acceptability became a critical consideration of the quality of healthcare. **Objectives:** This research explores the experience of patient's acceptability of 'Hay Bidan' as an online maternal care during the pandemic. **Methods:** A qualitative study with phenomenology design was performed through semi-structured interviews. Using purposive sampling, the informants included were women (n=5) and midwives (n=5) during the pandemic from January until March 2022. Thematic analysis was carried out according to Colaizzi's method approach. **Results:** 'Hay Bidan' was perceived as acceptable and fit with participant values. The researchers analyzed two main themes: the effectiveness of the health accessibility and the satisfaction with midwifery quality care. In addition, they reported that it was helpful regarding ease of use, flexibility, midwives' competencies, and attitude. **Conclusion:** This study showed that a systematic and structured online consultation management service using WhatsApp through the 'Hay Bidan' serviced, is acceptable and can be an alternative during the pandemic. This is because of its ease of use in terms of affordability, simplicity, and flexibility, and served by competent and well-behaved midwives. Besides, it can also help other health providers handle the patients due to COVID-19. Therefore, future research should explore the need for health workers to develop teleconsultation.

Keywords: Acceptability, Teleconsultation, Digital Solution, Midwifery

INTRODUCTION

The coronavirus 2019 (COVID-19), the severe acute respiratory syndrome caused by the coronavirus, was first detected in Wuhan, China, in December 2019 and then spread worldwide, including Indonesia [1]. During the pandemic, pregnancy carries a very high risk [2]. New viral infections in the pregnant maternal population expose many unknown dangers. The most direct is pregnancy, maternal, and perinatal outcomes. Reviews of early reports of the impact of COVID-19 on pregnancy show mixed results. One piece of information reported that more than 90% of pregnant women with COVID-19 had cesarean delivery with 10.7% fetal distress and 21.3% preterm delivery. Another reported situation is bleaker, with more than 60% fetal distress [3]. Apart from the fact that pregnant women are very susceptible to infection with the SARS-CoV-2 virus, the pandemic has disrupted the health care system in

health facilities. Thus, it disrupts pregnant women's access to health services[2]. Therefore, strategies are needed to increase access to services for vulnerable groups, namely pregnant women and children.

In this case, Telemedicine is often considered the best possible patient care solution during a pandemic. However, as of March 2020, Telemedicine has been used globally [4]. In Indonesia, Telemedicine can significantly increase the prevention knowledge about COVID-19, especially for the productive age group [5]. In this regard, the Association of Midwifery Alumni of Universitas Gadjah Mada (KABIDGAMA) initiated the "Hay Bidan," an online maternal care providing teleconsultation between women and midwives as one of strategies to implement and improve the quality of maternal care. In line with recent systematic literature review, the WhatsApp mobile application is a system used as a communication or learning tool for providing health information between healthcare professionals and the general public. However, further research is still needed to strengthen the evidence that WhatsApp is an effective telemedicine tool category [6]. Currently, 'Hay Bidan' are still being developed according to a user-centered approach where patient acceptance and satisfaction are relevant to potential service launches and indicators commonly used to measure quality in healthcare [4].

Moreover, successful implementation depends on the acceptance of the intervention by the provider (e.g., patient, researcher, or healthcare professional) and the recipient (e.g., patient or healthcare professional) [7]. On the side of the patient's perspective, the implications for acceptance can be in terms of the content, context, and quality of care received. If the intervention is deemed acceptable, patients are more likely to adhere to treatment recommendations and benefit from better screening. The extent to which an intervention is perceived as "acceptable" by patients, family members, care providers, institutional review boards, and policymakers is at the core of digital health research and practice [8]. In addition, *acceptability* is defined as a multi-faceted construct that reflects the degree to which the person giving or receiving a health care intervention considers it appropriate, based on the anticipated or experienced cognitive and emotional responses to the intervention [9]. Therefore, this study aims to explore the acceptability from the end-user side of online maternal care interventions through 'Hay Bidan' during the pandemic. This study used the Theoretical Framework of Acceptability (TFA) consisting of seven construction components: affective attitude, burden, perceived effectiveness, ethics, intervention coherence, opportunity cost, and self-efficacy.

MATERIAL AND METHOD

A descriptive-phenomenology qualitative research design was used to interpret the meaning of end-user experience while using 'Hay Bidan' during pandemic to build data themes (5). Thematic analysis was carried out using Colaizzi's method approach as a strategy in nursing research [6] was chosen because it tends to produce a detailed description of the theme that captures the significance of the 'living' experience [5][10]. Colaizzi's method consists of 7 steps, as follows: 1) Obtaining a general sense of each Transcript; 2) Extracting significant statements; 3) Formulation of meanings; 4) Organization of formulated meanings into clusters of themes and themes; 5) Exhaustively describing the Phenomenon; 6) Describing the fundamental structure of the Phenomenon; 7) Returning to the Participants [10].

1. Participant Selection

Women who had used the 'Hay Bidan' service were recruited using purposive sampling. Specifically, according to a database, participants who used 'Hay Bidan' in the last three months from January-March 2022 were contacted by the first and second author and invited to the interview by WhatsApp. The interview process was conducted by the first, second, third and fourth authors.

As many as eight participants who met the criteria were included in the study. All the participants were represented with the different topics in 'Hay Bidan' services, such as the patient's prenatal, postnatal, newborn, and children. However, as many as six participants invited with the topic of family planning, reproductive health, and toddler growth cannot join the study. Most of them did not answer the invitation while others said having a job or working. Hence, only eight participants were eligible to join the entire interview process.

The inclusion criteria were age (15–49 years old), currently having no physical limitations, medical conditions, or mental conditions, owning a smartphone, having internet access, and being willing to participate in the interview. Meanwhile, the participants who refused to be part of the study has excluded

2. Setting

Due to COVID-19 restrictions, the semi-structured interview was conducted via video conference and phone call. The description of the participants consisted of three pregnant women, one postpartum woman, one mother with children, and five people of source triangulation involving two midwives as volunteers of 'Hay Bidan' and a professional midwife who recommended this service. The following characteristics description of the participants is shown by Table 1 and Table 2.

Table 1. Description of Participant of 'Hay Bidan' as Patient

Sample	Age	Topic of Consultation	Parity	Educational Level	Occupation
P1	27	Postnatal and Newborn	Primiparous	Higher Education	Working Mom
P2	25	Prenatal	Primiparous	Higher Education	Working Mom
P3	38	Prenatal	Multiparous	Higher Education	Working Mom
P4	30	Prenatal	Primiparous	High-School	Working Mom
P5	21	Mother with Children	Primiparous	High School	Non- Working Mom

Table 2. Description of Participant as Midwives

Sample	Age	Category	Educational Level	Occupation
M1	27	Volunteer of Hay Bidan	Bachelor of Applied Midwifery	Midwife
M2	25	Volunteer of Hay Bidan	Bachelor of Applied Midwifery	Midwife
M3	26	Volunteer of Hay Bidan	Bachelor of Applied Midwifery	Midwife
M4	25	Volunteer of Hay Bidan	Bachelor of Applied Midwifery	Midwife
M5	38	Professional Midwife who recommended Hay Bldan	Bachelor of Applied Midwifery	Midwife

3. Data Collection

The interview focused on generating information about participant experiences, needs, and preferences regarding the 'Hay Bidan' intervention during pandemic. Before the interviews, participants accessed information about consent's purpose and design. The interview guide (box 1) was based on the Theoretical Framework of Acceptability (TFA) [9] entails of seven constructs (Figure 2). It can be used to understand how people consider 'Hay Bidan' intervention appropriate based on expected or experienced cognitive and emotional responses to intervention. It that can be done before (future acceptability), while (concurrent acceptability), or after (retrospective acceptability) participating in an intervention. In this study, the researchers investigated retrospective acceptability.

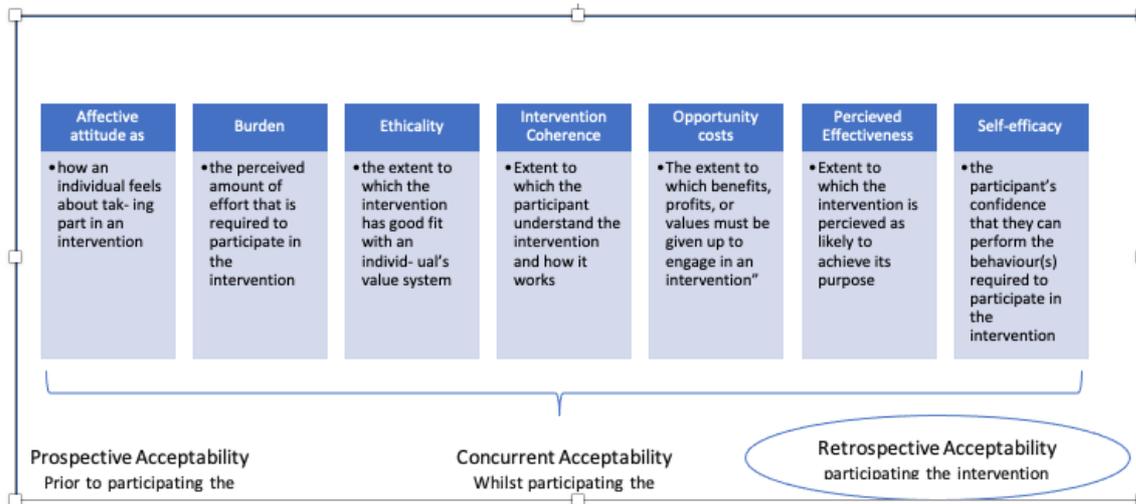


Figure 2. The theoretical framework of acceptability comprises seven component constructs. Note: The seven component constructs are presented alphabetically with their anticipated definitions. The extent to which they may cluster or influence each temporal acceptability assessment is an empirical question [9].

Box. 1
Semi Structured Interview

**Semi-structured Interview Guide
Based on Theoretical Framework of Acceptability (TFA)**

Questions	Key Probing
Affective Attitude - How is your experience using “Hay Bidan” services in general?	- The feeling while using - Feeling helped - Affects health
Burden - How difficult or burdensome are you in using the “Hay Bidan” service?	- Difficultness - Burden - Bother
Ethically - How appropriate is your value of consulting services from Midwives through “Hay Bidan” in responding to maternal complaints and problems?	- Satisfaction accurately solution
Intervention Coherence - How is the solution from the Midwife in running Hay Bidan online consultation service?	- Understanding - Answer the problem - Clear - Attitude
Opportunity Cost - How do you feel about the benefits of Hay Midwife's services?	- Advantages - Value
Perceived Effectiveness - How effective or helpful is the midwife's hay service in answering the mother's problem?	- Service quality
Self-Efficacy - How confident are you in Hay Midwife's services to address your mother's problems?	- Intention to use

4. Data Analysis

Interviews were transcribed verbatim with the Colaizzi's thematic analysis method used to understand experiences, thoughts, or behaviors across a data set [11]. The Nvivo-12 Plus software tool was used to organize, obtain an overview of the data, and compile the coding. The analysis begins with reading field notes and transcripts to obtain a general sense of each transcript. Next, researchers read the transcription results repeatedly to understand the content clearly. After that, the first author initiated to identify significant statements from the transcript to find codes, followed by formulating meanings that had been discussed with the fourth and fifth authors. These formulated meanings were then coded and categorized and were checked for the correctness of these processes and consistency. In this step, there were 21 codes and eight categories as the basis for developing sub-themes that were checked for accuracy by the five authors involved.

Subsequently, combining all the sub-themes, constructing meaning to describe the merged themes as a whole which shown in thematic map (Table 3). It was then presented to confirm its completeness and its reflection on the experiences of women in using 'Hay Bidan' during pandemic. Finally, the search was carried out again to avoid repetitions and make a clear and concise description of the phenomenon. The final step was to validate the study findings using "member checking" by returning to the participants for a follow-up interview. Furthermore, the five authors worked together iteratively to ensure that the narrative was representative of the data, which helped establish a credible interpretation.

Table 3. Thematic Map

Themes	Sub-Themes	Categorizing	Coding
Effectiveness of the Service Accessibility	Ease of use	Affordability	Free of charge
			Only need daily quota
		Simplicity	One application
			Familiar with WhatsApp
	Flexibility	Flexible place	Keep distancing
			Can do anywhere
		Flexible time	Helpful for working mom
			Feel unrushed
Satisfaction of Midwifery Quality Care	Midwives' Competences	Improving Health Management	Increasing knowledge
			Assisting simple decision
			Facilitating non-emergency case
		Health discussion partner	
		Accuracy Suggestion	Solution as needed
			Easy to understand
	Midwives' Attitude	Patient-centered service	Comprehensive explanation
			Midwives are happy to help
			Kind-hearted midwives
			Friendly and polite midwives
			Encouraging new mother
			Giving mental support
	Increasing patients' confidence		
	Making women feel safe		

5. Trustworthiness

Trustworthiness is one-way researchers can convince their readers that their research findings are worthy of attention by introducing the criteria of credibility, transferability, dependability, and confirmability [12]. Consistency and validity were achieved by matching the choice of methodological approach to the research question. The sources of triangulation were four volunteers of midwives in 'Hay Bidan' and a professional midwife who gave recommendations of 'Hay Bidan' to their clients' to keep the inquirer objective [13]. The

researchers followed the consolidated criteria for reporting qualitative research to write this study (COREQ) [14].

RESULTS AND DISCUSSION

All participants (n=8) agreed that 'Hay Bidan' was very helpful in solving problems; even three patients admitted that the midwife was too good because the service was free and the answers were comprehensive, making it easier to make simple decisions during the pandemic. Moreover, several professional midwives in other agencies recommended this service as it contributes to treating pregnant women. Especially at that time, many health workers were busy with COVID-19 cases in the field. However, two patients expressed that the service time was not 24 hours, so they could only use it in the morning until the evening.

(1) The Effectiveness of the Service Accessibility

Ease of use

Patients showed enthusiasm for the services because they were easily accessible and appropriate. They also said that 'Hay Bidan' was affordable and straightforward since it was free of charge and was through WhatsApp Messenger, an application that was very familiar for daily communication in Indonesia.

"There are no problems, because it is only through WhatsApp so there is no need to install other applications, because sometimes the cellphone memory is full and at least there must be a signal and quota, I have used the 'Hay Bidan' service 3 times".

(Patient Interview 5)

Flexibility

'Hay Bidan' is a very effective and efficient service regarding time and place. Another patient also stated that since using "Hay Bidan," she could ask for health suggestions through WhatsApp, and she did not feel pressed for time and could submit all of the complaints compared to direct consultation.

It is very effective going online like this, so we do not have to meet face to face and come all the way to the place of service. Through cellphone, we have made it very easy, especially if those who work have limited time. (Patient Interview 3)

(2) The Satisfaction of the Midwifery Care

Ethically, patients felt that the solutions offered during the consultation were satisfied. Furthermore, they felt that the midwives were competent and had a good attitude. Therefore, it is comfortable and trusting to consult through the 'Hay Bidan' service.

Midwives Competences

In this term, midwives are considered capable of improving remote patient health management. This method is explained through the patient's opinion about the ability of midwives to increase the mother's knowledge in counseling, assisting simple decisions, facilitating non-emergency cases, and even midwives can become partners in discussing health which is much needed instead of having to seek uncertain information.

To further strengthen medical directions and instructions, at first, I was doubtful whether I should take this medicine. Then going to the doctor was complicated at the time, so the midwife at 'Hay Bidan' could strengthen me to ask for medical advice and get support. (Patient Interview 3)

In addition to improving the ability to manage health, midwives were also considered capable of providing accurate suggestions according to patient needs with easy-to-understand and comprehensive explanations.

The solution for handling and the answer I asked was correct; maybe, on a scale of 10-100, I will give 90%, the solution is good. (Patient Interview 4).

On the other hand, the health workers feel helped by the existence of 'Hay Bidan' This is evidenced by one of the midwives who work outside the agencies and recommended this service.

The existence of 'Hay Bidan' helps health workers who do not have teleconsultation/practices in the clinic, so if there are patients who want to consul freely for a long time and not limited in time, they can go through teleconsultation such as 'Hay Bidan' (Midwife Interview 8)

Afterwards, patients showed a positive attitude towards the service because the explanation was comprehensive. They reported that the advice from midwives in 'Hay Bidan' was relevant to apply.

The answer was satisfactory; when I asked about MCH, it was suggested that herbs were correct, sometimes, it was different from parents, so the midwife said to respect parents' opinion. Because in the past, people used to be laymen, and they said sick children were told to have red onions. Then, the midwife recommends breastfeeding (Patient Interview 2)

Midwives' Attitude

Almost all interviewed patients said the online midwife always gave an amicable and kind answer. Midwives put the interests of patients. First, even the midwives on duty said that they were delighted to be able to help patients.

The feeling experienced after providing an online consultation through Hay Midwife, happy because it can still be useful for others ((Midwife Interview 6)

Therefore, from the patient's perspective, the midwives stated that the competence of the midwives was very satisfactory in terms of being kind-hearted midwives, friendly and polite.

The midwife is very good, friendly and also very polite, even I feel embarrassed whether I talk a lot or not (Patient Interview 3)

However, a service hour makes some patients want a more extended time; for example, held at night when an emergency can take advantage of this service.

Actually, it is not difficult, just because the service is limited in-service hours, there are those who are 24 hours, even though we consult as long as we can. (Patient Interview 2).

DISCUSSION

In this case, overall, patients said that online teleconsultation through 'Hay Bidan' was very helpful in solving health problems during the pandemic. Furthermore, it aligns with Baudier's (2020) research that teleconsultation eliminates transportation costs and allows patients to access relevant doctors directly and instantly, regardless of location [15]. In addition, researchers believe telemedicine will not wholly replace face-to-face visits but has succeeded in replacing a small part of them [16]. In this study, the researchers analyzed the acceptability of 'Hay Bidan' through two main themes: the effectiveness of the service accessibility and the satisfaction of midwifery quality care.

Regarding the effectiveness of the service accessibility, 'Hay Bidan' showed an excellent alternative to increasing women's health during a pandemic. It was because of its ease of use, affordability, simplicity, and flexibility regarding the time and place. Participants showed that teleconsultation using WhatsApp without paying was very helpful in the pandemic. In line with the general goals of telehealth, 'Hay Bidan' intends to reduce the burden on health care systems by reducing high-cost service fares, reducing travel costs, and identifying potential problems early before they become severe medical episodes [17]. Moreover, the previous study showed that WhatsApp is a cost-effective, quick, reliable, and user-friendly tool, particularly regarding health consultation. Therefore, it can provide a more significant proportion of patients and the general public with guideline recommendations and treatment [18]. In addition, the previous research showed that telehealth allows earlier intervention, reducing the frequency with which expensive hospital-based care is required [19].

The second theme is satisfaction with the quality of midwifery care, which is seen in the midwives who provide their services in terms of competence and attitude. Midwives in 'Hay Bidan' were competent and experienced. They could help the patient to improve health

management by increasing knowledge and assisting in simple decisions about whether they should go to the hospital or not. It is consistent with the previous study that satisfaction is one factor in increasing health quality. It is because perceived risk, trust, and facilitating conditions can assist the provision of adequate telemedicine services, particularly in developing countries [20].

Under a systematic review study from Deldar (2016), teleconsultation reported changes in treatment plans, referral or evacuation rates, diagnosis changes, and educational effects. From the health provider side, remote consultation provides high quality in fast decision making, shortens the time of faster diagnosis and better patient management, reduces the length of hospitalization and intensive care, increases triage accuracy, reduces anxiety, values education, increases self-confidence, and reduce the number of unnecessary procedures [21]. This is relevant to the patient's opinion about "Hay Bidan," who provides appropriate services by competent midwives in providing faster intervention before the further examination at the hospital.

Furthermore, the 'Hay Bidan' service is patient-centered and managed by certified, educated, and licensed midwives. It is one of the reasons that patients felt confident with suggestions and were helped in making decisions. Quality midwifery services should have fully recognized the importance of person-centered and people-centered care [22]. However, some patients asked to have 24-hours services in the 'Hay Bidan' teleconsultation due to the limited time. Thus, regularly evaluating the system will benefit developing the digital intervention [23]. Before measuring the impact of behavior changes, the digital intervention's success is shown by the end users' evaluation through acceptability.

CONCLUSION

Overall, "Hay Bidan," as online maternal care through a structured and systematic online consultation service via WhatsApp application, was acceptable for dealing with health complaints before going to a health provider, especially during the pandemic.

It was an effective solution because of its ease of use in terms of affordability and simplicity, flexibility, and were served by competent and well-behaved midwives. Furthermore, this online services management structured by midwives could help other health workers who were busy managing COVID-19 patients and could be a place to spread benefits for 'Hay Bidan' volunteers to become more valuable. Therefore, future research should explore the need for health providers to develop teleconsultation.

LIMITATION

The limitation of this study was that in-depth interviews with participants were not conducted in person but online via telephone, WhatsApp Messenger, and Zoom Meeting to prevent the spread of the virus due to the COVID-19 pandemic, so it was carried out according to health protocols. This online interview process has weaknesses, such as being unable to observe body language during the interview process.

AUTHORS' CONTRIBUTIONS

Conceptualization, I.W.P., T.S.; methodology, I.W.P., T.S., K.N.S; writing—original draft preparation, I.W.P., Y.D.A.; writing—review and editing, I.W.P., Y.D.A., T.P.S; validation, I.W.P., T.S., L.N.S; formal analysis, I.W.P., T.S., K.N.S; supervision I.W.P., T.S., K.N.S., Y.D.A., T.P.S; All authors have read and agreed to the published version of the manuscript.

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DISCLOSURE STATEMENT

The authors report no conflicts of interest. The authors alone are responsible for the content and writing of the paper.

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