The Open Nursing Journal

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RESEARCH ARTICLE

Japanese Midwives' Perceptions of Goal Setting with Hospitalized Women with Pregnancy Complications: A Qualitative Descriptive Study

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Abstract:

Background:

Midwives aid hospitalized women with pregnancy complications in setting pregnancy duration goals for maternal and fetal well-being. However, there is little research regarding midwives' views on goal setting among inpatients with pregnancy complications.

Objective:

This study examined how Japanese midwives perceive the significance of goal setting among women hospitalized for pregnancy complications.

Methods:

This qualitative descriptive study was conducted at five tertiary perinatal centers in Mie Prefecture, Japan, from January 2019 to June 2020. Data were collected through purposive sampling using semi-structured, one-on-one interviews with Japanese midwives experienced in antenatal care for high-risk pregnant women. Qualitative content analysis was used to analyze the data.

Results:

Thirteen midwives participated in this study. According to the data analysis, goal setting is significant in four ways: (a) relieving psychological distress among pregnant women, (b) helping pregnant women think positively about their efforts to continue the pregnancy, (c) promoting the transition to motherhood, and (d) contributing to the effective care of pregnant women.

Conclusion:

This study indicates midwives' recognition that goal setting positively contributes to the psychosocial status of hospitalized pregnant women and the care provided to them. These results suggest that midwives support pregnant women in goal setting by considering their current situation and future mother–child relationships.

Keywords: Antepartum care, Goal setting, Goal sharing, High-risk pregnancy, Midwives, Pregnancy complications, Qualitative research.

Article History	Received: August 01, 2023	Revised: September 03, 2023	Accepted: September 11, 2023

1. INTRODUCTION

Globally, studies have shown that approximately 7–16% of pregnant women are hospitalized for pregnancy complications (PC) [1 - 3]. The Japanese guidelines recommend considering hospitalization for pregnant women with PC, such as threatened preterm labor (TPL), preterm premature rupture of the membranes (p-PROM), placenta previa, and uterine atony [4]. Tocolytic agents are utilized to delay preterm delivery for women with such complications [4, 5]. Around 70% of providers use tocolysis up to 35 weeks of gestation [6]. The proportions of patients who experienced tocolysis for 14-27 days and ≥ 28 days were 21.9% and 28.7%, respectively [5]. Consequently, PC can lead to prolonged antenatal hospitalizations in Japan.

High-risk pregnant women encounter various stressors, such as anxiety about their fetus's well-being, duration of hospitalization, separation from their family, and concerns about the care of children at home [7, 8]. The stress levels of inpatients with PC are higher than those of pregnant women

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without PC [9], and their stress levels steadily increase through the first five weeks of hospitalization [10]. Hospitalized women with PC cope with stress using various strategies, including setting goals, maintaining a positive attitude, and accepting their situation [11, 12]. When setting goals, inpatients with PC can identify their ideal pregnancy duration to assure maternal and fetal health and safety [11, 13]. A hospitalized woman's goals during pregnancy include fetal growth and development (*e.g.*, the weeks of gestation when fetal breathing matures) and full-term birth [12 - 14]. Therefore, goal-setting support helps inpatients with PC cope with the stress caused by hospitalization and activity restriction.

Healthcare professionals (HCPs) particularly midwives should help pregnant women hospitalized with PC set goals. Midwives play an essential role in providing pregnancy care to women in addition to supporting them in setting goals. Thus, understanding midwives' perceptions of goal setting and their experience with providing similar support is crucial. Several studies have examined goal setting by women hospitalized with PC [11 - 13] and the factors they consider when setting goals [14]. However, little is known about the perceptions and experiences of midwives regarding goal setting in this context. Therefore, this study explored midwives' perceptions regarding the significance of goal setting for continuing pregnancy among women hospitalized with PC.

2. METHODS

2.1. Study Design

We used a qualitative descriptive design for this study, which provides a comprehensive overview of events in everyday language use and is the preferred method when explicit descriptions are desired [15]. This design is suitable for exploring goal setting among inpatients with PC from the midwives' perspective.

2.2. Participants

Purposive sampling was used to select midwives with sufficient experience and knowledge related to the research objectives. This method enriched the findings and research contributions. The eligibility criteria were as follows: The participant (1) took care of women hospitalized due to PC within the past year and (2) fulfilled at least one of the two following criteria; (a) received the Clinical Ladder of Competencies for Midwifery Practice (CLoCMiP) Level III certification by the Japan Institute of Midwifery Evaluation (JIME) and/or (b) worked at the obstetrics ward of tertiary perinatal medical facilities for > 10 years. The "CLoCMiP Level III" competency certification by the JIME refers to the ability to practice midwifery with autonomy and independence [16]. Therefore, we determined that midwives with the "CLoCMiP Level III" certification can responsibly support inpatients with PC while considering their individuality. Moreover, it requires a decade of preparation to achieve expertise in each domain [17]. Hence, we considered midwives with over 10 years of midwifery experience at the obstetrics ward of tertiary perinatal medical facilities as possessing the same competency as the "CLoCMiP Level III" certification. We excluded midwives above the level of a head nurse from participating in this study.

We recruited participants in five tertiary perinatal medical facilities in Mie Prefecture, Japan. We asked the nursing directors of these facilities to introduce midwives who met the eligibility criteria to us. First, the facility's nursing directors or the head nurses of the maternity wards distributed documents to inform the research outline and invitation letters to the midwives. Then, the midwives who were willing to participate in this study mailed us a form with their contact information, including e-mail addresses and cellphone numbers. Subsequently, the first author arranged the interview schedule according to the participant's preference. As a result, 23 midwives were given invitation letters, and 13 midwives were enrolled.

2.3. Data Collection

Semi-structured, one-on-one interviews were conducted between January 2019 and June 2020 by the first author (T.I.), who has in-depth interview and midwifery experience. The interviewer was known as a former colleague or researcher to some participants. However, the interviewer had not been in contact with any of the participants for over seven years. Each face-to-face interview was conducted in a quiet, private room at the participant's or researcher's workplace during the participant's free time.

At the beginning of the interview, we obtained the demographic characteristics of the participants. This study used an open-ended interview style to allow participants to share their perceptions and experiences freely regarding goal setting for inpatients with PC. The main questions included: "How do you recognize the significance of setting and sharing goals?" "How do you provide support for pregnant women in setting goals?" "How do you share goals with pregnant women?" The interview guide was pilot-tested in the first two interviews, and the researcher modified it slightly with supervision from a midwifery researcher. After obtaining written informed consent, the interviews were recorded on digital audio equipment. The in-depth interviews lasted between 40 and 70 minutes.

After 10 interviews, new data repeated previous data's content, which indicated data saturation [18]. The researcher conducted three further interviews to confirm the likelihood of data saturation. After each interview, participants received a Japanese 3,000 yen gift certificate as an honorarium.

2.4. Data Analysis

All interviews were transcribed verbatim by audio transcription professionals. The researcher (T.I.) rechecked them for accuracy. Both authors (T.I. and M.M.) participated in the data analysis. Qualitative content analysis was used to analyze the data because existing knowledge about goal setting in inpatients with PC is limited [19]. The analysis includes three phases: preparation, organizing, and reporting [19]. The preparation phase starts with selecting the unit of analysis, depending on the research question. We selected the transcribed interviews as the unit of analysis and decided to analyze only the data's manifest content. Next, the researchers

read the transcriptions repeatedly to become immersed in the data and obtain a sense of the whole. In the organizing phase, the researchers identified words, sentences, or paragraphs containing aspects related to the phenomenon of interest in this study as meaning units. The meaning units were condensed into codes using participants' words. Codes were then sorted into subcategories based on how different codes were related and linked. Furthermore, subcategories with similar meanings were grouped under categories. All the categories were named inductively using content-characteristic words. We analyzed the data manually. In the reporting phase, we described the emerging subcategories and categories in depth.

2.5. Rigor and Trustworthiness

This study's rigor was supported by the criteria proposed by Lincoln and Guba [20]. Five of the participants reviewed and confirmed the study's findings (categories and subcategories) to ensure the study's credibility. Furthermore, creating an interview atmosphere of intimacy and trust and securing sufficient response time enhanced credibility. Concerning confirmability, two researchers discussed and reviewed the findings until a consensus was reached. Detailed information on research methodology, setting, participants, and researchers and a thick description of the findings using verbatim quotations ensured transferability. Describing the process of data collection and analysis in detail ensured dependability.

2.6. Ethical Considerations

The study protocol was approved by the Mie Prefectural College of Nursing Research Ethics Committee (No. 181802) and by each hospital from which participants were recruited. Written informed consent was obtained from the participants after providing written and oral information about the study prior to each interview. The researcher assured participants that (a) they retained the right to withdraw from the study and (b) all data would be kept anonymous and processed confidentially.

3. RESULTS

Thirteen midwives participated in this study. The characteristics of the participants are presented in Table **1**. Four categories that describe different aspects of midwives' perceptions regarding the significance of goal setting among hospitalized pregnant women emerged from the qualitative content analysis (Table **2**). We describe each category and subcategory in depth in the following sections.

Table 1. Characteristics of the participants (n = 13).

-	n (%) or Mean ± SD	Range: Min–Max
Age (years)	-	-
30–39	4 (30.8)	-
40–49	6 (46.2)	-
50–59	3 (23.1)	-
Gender	-	-
Female	13 (100.0)	-
"CLoCMiP Level III" certification [a]	-	-
Yes	12 (92.3)	-
No	1 (7.7)	-
Years of midwifery experience	15.85 ± 5.64	6–26
Years of midwifery experience at the obstetrics ward of tertiary perinatal medical facilities	13.23 ± 4.81	6–22

Abbreviations: SD, standard deviation; CLoCMiP, Clinical Ladder of Competencies for Midwifery Practice.
Note: [a] CLoCMiP Level III competency refers to the ability to perform midwifery with autonomy and independence.

Table 2. Categories and subcategories of midwives' perceptions regarding the significance of goal setting among hospitalized women with PC.

Category	Subcategory
Relieving psychological distress among pregnant women	Compared to long-term goals, setting short-term goals imposes less psychological burden on pregnant women.
	Having a goal in mind can help relieve anxiety in pregnant women.
	Achieving goals can provide emotional relief.
Helping pregnant women think positively about their efforts to continue pregnancy.	Short-term goals can help maintain motivation.
	Setting goals can help pregnant women remain focused and motivated during pregnancy.
	Goal sharing can provide a positive attitude toward continuing pregnancy.
	Achieving goals can help provide motivation and a positive outlook.
Promoting the transition to motherhood	Focus on ongoing efforts and achieving goals contribute toward developing mother–child relationship.
	Focus on ongoing efforts and achieving goals may relieve maternal guilt for preterm birth.

(Table 2) contd.....

Category	Subcategory
Contributing to the effective care of pregnant women	Support for goal setting and sharing can help healthcare professionals gain trust of pregnant women and families.
	Support for goal setting can help healthcare professionals in providing appropriate care for each woman.

3.1. Relieving Psychological Distress among Pregnant Women

This category included three subcategories. The participants explained that hospitalized women experienced psychological distress related to PC and hospitalization. Setting and achieving goals contributed to relieving this psychological distress.

3.1.1. Compared to Long-term Goals, Setting Short-term Goals Imposes Less Psychological Burden on Pregnant Women

The participants reported various psychological distress factors among hospitalized pregnant women. These concerns included worries about the pregnancy outcome, such as preterm birth, anxiety about family members at home, especially other children, and the stress associated with separation. Furthermore, pregnant women may get depressed if HCPs explain the outcome of preterm infants and prolonged antenatal hospitalizations. The participants stated that pregnant women were sometimes unable to control how they think about the distant future owing to psychological stress. The participants explained that those women should set short-term goals and focus on the immediate future of the pregnancy. They also stressed that short-term goals could put less mental pressure on hospitalized pregnant women than long-term goals when seeking goal achievement. The participants recommended achievable short-term goals, describing any period between one day and two weeks as short-term.

When obstetricians explain to pregnant women the complications and diseases that can occur in preterm infants, the pregnant women think, "whatever, I don't care," and feel downhearted. So, they should set short-term goals, such as three days and one week, and think about the future of the pregnancy little by little. (Participant 3)

3.1.2. Having a Goal in Mind Can Help Relieve Anxiety in Pregnant Women

The participants reported that inpatients with PC had an uncertain outlook for their pregnancy and fetus's future. The participants explained that setting goals can help pregnant women see the immediate future of the pregnancy and have an idea of how long they should continue setting goals, relieving their uncertainty and anxiety.

Pregnant women without any goals cannot see the future of the pregnancy and are full of thoughts such as "I want to escape from here as soon as possible" and "How long should I stay in this hospital?" Setting goals can provide them with an outlook for the near future of the pregnancy and reduce their anxiety. (Participant 1)

3.1.3. Achieving Goals Can Provide Emotional Relief

The participants explained that achieving goals helped pregnant women realize that they continued the pregnancy to their target date and reached a significant milestone. The participants also stated that achieving goals helped pregnant women realize that they were approaching the final goal steadily and that the fetus was gradually maturing.

Even low-risk pregnant women may have some anxiety about their current pregnancy. Pregnant women will have increased anxiety if they must be hospitalized for pregnancy complications. So, hospitalized pregnant women need more opportunities to feel relief than low-risk pregnant women. Achieving goals will give hospitalized pregnant women relief that they have reached an important day in their pregnancy. (Participant 7)

3.2. Helping Pregnant Women Think Positively about Their Efforts to Continue Pregnancy

This category comprised four subcategories. The participants explained that setting and achieving goals and sharing them with HCPs and families can help pregnant women have positive thoughts about their efforts to continue their pregnancy until the final goal is achieved.

3.2.1. Short-term Goals Can Help Maintain Motivation

The participants explained that short-term goals helped maintain women's motivation to continue pregnancy because pregnant women could view short-term goals as goals within reach. In contrast, the participants reported that pregnant women setting long-term goals could get exhausted, discouraged, and stressed along the way. Consequently, their motivation to continue pregnancy could drop.

Pregnant women will want to continue pregnancy until 40 weeks or 10 months if possible. But, such goals are very tough for pregnant women admitted in the second trimester because long-term goals take time. Meanwhile, goals that a pregnant woman can count on the fingers of one hand (i.e., take one week or less to achieve) are "visible" goals. Setting such short-term goals can help them stay motivated. (Participant 11)

3.2.2. Setting Goals Can Help Pregnant Women Remain Focused and Motivated during Pregnancy

The participants described the significance of goal setting based on understanding fetal growth and development. They supported pregnant women's goal setting while explaining their current conditions, expected course of pregnancy, and fetal growth and development. The participants explained that the HCPs' explanations helped pregnant women understand their fetal growth and development and realize that their efforts would contribute to fetal maturation. The participants stated that this understanding helped pregnant women remain motivated to continue the pregnancy and helped those requesting discharge recognize the need for hospitalization and treatment.

After the pregnant women reach their goals, I explain the fetal growth and development and suggest their next goals. Then, they can understand how their baby will mature after achieving future goals. This understanding can motivate them to protect the baby in their womb. (Participant 6)

3.2.3. Goal Sharing Can Provide a Positive Attitude toward Continuing Pregnancy

The participants explained that some pregnant women thought they had to endure and surmount hospitalization due to PC by themselves, and others desired to avoid the situation. The participants stated that sharing goals helped pregnant women recognize that HCPs supported them. The participants explained that women's perceptions could reduce their psychological burdens and distress and enhance their willingness to try hard with HCPs, improving their outlook toward their pregnancy.

Many pregnant women think they must endure the situation to protect their babies and feel psychological pressure. Sharing goals with HCPs will make pregnant women perceive HCPs as supporters who are on the same page. This perception will reduce the psychological pressure and help them think positively about continuing the pregnancy. (Participant 10)

3.2.4. Achieving Goals Can Help Provide Motivation and a Positive Outlook

The participants described the significance of achieving goals together with support from family and HCPs. They explained that pregnant women achieve their goals through their efforts with support from their families and HCPs, who have the same goals. The participants stated that pregnant women, their families, and HCPs who achieved their goals shared the pleasure of achievement, and pregnant women and their families expressed their appreciation. The participants believed that this goal-achievement process could help motivate pregnant women and encourage them to pursue additional goals.

Pregnant women, their fetuses, and their families try hard to support each other. They appreciate each other's *efforts and mutual support that contributed to coming this far. These positive experiences encourage pregnant women to overcome the present situation and move toward their future goals.* (Participant 13)

3.3. Promoting the Transition to Motherhood

This category included two subcategories. First, the participants explained that achieving goals and recognizing efforts to obtain them can promote prenatal attachment and develop the mother–child relationship. In addition, the participants stated that these factors could relieve women's guilt for preterm birth, positively affecting postpartum attachment and their perception regarding the childbirth experience. Finally, the participants emphasized the importance of recognizing pregnant women's efforts, regardless of whether goals were obtained.

3.3.1. Focus on Ongoing Efforts and Achieving Goals Contribute toward Developing Mother-child Relationship

During hospitalization, pregnant women endured challenging conditions to protect their fetuses. They derived satisfaction from achieving goals. The participants explained that such a sense of achievement and recognizing the ongoing efforts could help increase pregnant women's confidence in becoming a mother, promote prenatal attachment, and provide a positive attitude toward childbirth and parenting.

Setting goals can motivate pregnant women to protect their fetuses, and they try to do what they can for the unborn baby. When they can recognize their own efforts to protect their fetus, their confidence in becoming a mother will increase. (Participant 9)

3.3.2. Focus on Ongoing Efforts and Achieving Goals May Relieve Maternal Guilt for Preterm Birth

The participants reported that when pregnant women did not recognize their efforts to protect their baby, they would think their lack of effort and perseverance caused their preterm birth and feel remorse and guilt. The participants explained that recognizing continued efforts could help pregnant women acknowledge their contribution to the baby's growth in the uterus. Furthermore, they explained that goal achievement and acknowledgment of efforts could relieve women's guilt for preterm birth, which positively affects postnatal attachment and encourages positive perceptions regarding their childbirth experience.

Hospitalized pregnant women think they are the only ones who can protect their baby in the womb. When they give birth prematurely, they will think they failed to protect their baby and feel regret and guilt. So, recognizing their continued efforts may reduce guilt and provide a positive attitude toward parenting. (Participant 12)

3.4. Contributing to the Effective Care of Pregnant Women

This category comprised two subcategories. First, the participants described the contribution of goal setting to the clinical practice of HCPs. Supporting and sharing goals could help HCPs gain pregnant women's and families' trust. Furthermore, providing support contributed to individualized and appropriate care for pregnant women.

3.4.1. Support for Goal Setting and Sharing Can Help Healthcare Professionals Gain Trust of Pregnant Women and Families

To support pregnant women's setting goals, the participants listened to them and sought to understand their feelings, perceptions, and thoughts about the current situation and prognosis. Communicating with pregnant women helps them confide their honest feelings and thoughts to HCPs. They asked HCPs various questions. Furthermore, the participants stated that sharing goals could make pregnant women and their families recognize that HCPs supported them while facing the same direction, leading them to trust HCPs.

Sharing goals contributes to increasing solidarity among pregnant women, their families, and HCPs. Not all cases go

well, but supporting goal achievement will help HCPs gain the trust of pregnant women and their families and build better relationships. (Participant 10)

3.4.2. Support for Goal Setting Can Help Healthcare Professionals in Providing Appropriate Care for Each Woman

The participants reported that trust in HCPs developed through supporting goal setting can lead pregnant women to confide more about their honest feelings and thoughts. The participants stated that understanding pregnant women's feelings, perceptions, and thoughts helped HCPs grasp their needs and provide individualized care. For example, the participants referred to prenatal education concerning childbirth, breastfeeding, and childcare, and "prenatal visits," where neonatologists described to the pregnant woman and her partner their baby's future condition at birth and what treatment and management their baby would require.

We usually arrange when a pregnant woman should receive a "prenatal visit," considering the pregnant woman's goals and the perceptions and feelings we grasped through goal-setting support. I give obstetricians and neonatologists advice, such as "A 'prenatal visit' may be too early for the pregnant woman because she did not expect her baby's birth to be so soon after setting a goal." (Participant 13)

4. DISCUSSION

To the best of our knowledge, this qualitative study is the first to explore midwives' perceptions regarding the significance of goal setting among women hospitalized due to PC. Different aspects of the midwives' perceptions were condensed into four categories. This study revealed that midwives perceive goal setting to have a positive impact on the psychosocial status and care of hospitalized pregnant women. Furthermore, the results suggest that midwives support pregnant women with goal setting by focusing on the women's current situation and taking into consideration future events such as childbirth and the parenting experience.

This study's findings suggest that midwives support setting and achieving goals to reduce the specific psychological distress among hospitalized pregnant women. The psychological distress described by the midwives aligns with previous studies, which reported that hospitalized pregnant women were concerned about the well-being and healthy development of their fetus and pregnancy outcomes, worried about their family members at home, and stressed by PC and hospitalization [13, 21]. Moreover, the midwives' opinions that achieving goals can provide emotional relief to hospitalized pregnant women are supported by prior qualitative research [22].

Previous studies showed that antenatal psychological distress was associated with multiple adverse perinatal outcomes. Perceived stress in late pregnancy was significantly associated with mid-pregnancy stress and had direct negative effects on neonatal weight, height, and head circumference at birth [23]. Moreover, meta-analyses showed that antenatal anxiety [24, 25] and depression [26] were associated with adverse perinatal and infant outcomes, including preterm birth, low birth weight, and breastfeeding. Similarly, depression among hospitalized pregnant women was independently and significantly associated with preterm birth [27]. Therefore, reducing anxiety, depression, and stress among hospitalized pregnant women can improve perinatal outcomes. Our study suggests that support for goal setting may relieve psychological distress among hospitalized pregnant women, contributing to improved perinatal outcomes. Future intervention studies are needed to examine the effect of goal setting on psychology among hospitalized pregnant women.

According to the interviewed midwives, short-term goals are more attainable. They reported that setting short-term goals helped maintain pregnant women's motivation to continue pregnancy because short-term goals are within reach. These results resemble a finding [28] that short-term goals helped maintain the motivation of rehabilitating patients with hand injuries because they were easier to attain. Conversely, Iwata *et al*. [14] reported that some hospitalized pregnant women perceived short-term goals as a simple checkpoint and set long-term goals based on their preferences. However, this study and several studies in other medical fields show that short-term goals help increase and maintain motivation and encourage positive attitudes [28 - 30]. Thus, short-term goals may help maintain motivation in hospitalized pregnant women to continue pregnancy; however, midwives should not uniformly help set short-term goals.

The midwives perceived that sharing goals and achieving them with support from family and HCPs can motivate pregnant women and provide them with a positive outlook and attitude toward their pregnancy. Hospitalized pregnant women hope for family involvement [31] and social support from HCPs [32]. Perceived social support among hospitalized pregnant women can increase when they share goals with HCPs or receive ongoing support to achieve those goals from family and HCPs. The increased perceived social support among hospitalized pregnant women can reduce their psychological distress. Studies have shown that perceived social support among hospitalized pregnant women is negatively associated with anxiety and depressive symptoms [33]. Family support [11] and HCPs [32] helped pregnant women cope with the stress caused by hospitalization. Midwives should continuously support pregnant women, develop relationships with their families, and help families provide them with appropriate and continuous support toward obtaining goals.

The participants noted that achieving goals and recognizing efforts to obtain them can promote prenatal attachment and contribute to developing mother-child relationships. They also reported that these factors could relieve women's guilt for preterm birth, positively affecting postnatal attachment. These results indicate that midwives support hospitalized pregnant women's goal setting considering the current and future mother–child relationships. Recognizing efforts to attain goals can help hospitalized pregnant women evaluate themselves positively, enhancing their self-esteem. Previous studies showed that higher levels of self-esteem were associated with higher levels of prenatal attachment [34]. Self-esteem also mediated the relationship

between social support and prenatal attachment [35] and between positive and negative affect and prenatal attachment [36]. Thus, positive feedback on the ongoing efforts of hospitalized pregnant women and goal achievement may enhance their self-esteem and contribute to promoting antenatal attachment.

Maternal guilt for preterm birth described by the participants aligns with previous studies [37, 38], which reported that mothers thought the preterm birth was their fault and felt guilty. Guilt over preterm birth seems to affect maternal–infant attachment [39]. Maternal guilt associated with preterm delivery was a barrier to kangaroo mother care adoption in the neonatal intensive care unit [40]. Alleviating maternal guilt may increase maternal willingness to face and hold the baby and promote maternal-infant attachment. However, the association between recognizing continued efforts to protect the fetus and feelings of guilt surrounding preterm birth has not been clarified. Future research is required to explain the association.

The midwives believed that when supporting goal setting, listening to pregnant women's voices and understanding their feelings and perceptions regarding the current situation and prognosis and their attitude toward continuing pregnancy could help gain the trust of pregnant women. This result is supported by a review [41], which reported the importance of patient-centered communication, including listening to, understanding, and being empathetic toward a patient's concerns, in developing trust in the patient–primary care provider relationship. The midwives also observed that developing trust with pregnant women led women to confide their honest feelings and thoughts to HCPs. Consistent with this result, Travelbee [42] stated that patients and their families are much more apt to tell nurses their fears and anxieties when they trust the nurse. Trust is regarded as the foundation of any therapeutic relationship, and trust in nurse-patient relationships results in improving the quality of patient care [43]. Understanding pregnant women's feelings, perceptions, and attitudes through goal-setting support may thus play an important role in gaining the trust of pregnant women and improving their care.

5. LIMITATIONS

This study has a few limitations. First, the transferability of this study's findings to different contexts might be limited because this study was conducted at tertiary perinatal centers in one area of Japan, and the sample size was 13 midwives due to the characteristics of qualitative research. Second, although obstetricians are also involved in hospitalized pregnant women's goal-setting, this study was only aimed at midwives. A similar study for obstetricians can also yield valuable results. Third, as this study explored the significance of goal setting from the midwives' perspective, the midwives' personal opinions or prejudice may be reflected in the results.

CONCLUSION

This study reveals midwives' perceptions regarding the significance of goal setting among pregnant women hospitalized due to PC. From the midwives' perspectives, setting, sharing, and achieving goals can help positively contribute to the psychosocial status of hospitalized pregnant women. Midwives should provide positive feedback on the ongoing efforts of hospitalized pregnant women and goal achievement. Supporting goal setting may help develop trust in pregnant women-HCP relationships *via* an understanding of pregnant women's feelings and perceptions regarding their current situation and prognoses, as well as attitudes toward continuing pregnancy.

LIST OF ABBREVIATIONS

(PC)	=	Pregnancy Complications
(TPL)	=	Threatened Preterm Labor

ETHICS APPROVAL AND CONSENT TO PARTICIPATE

The study protocol was approved by the Mie Prefectural College of Nursing Research Ethics Committee (No. 181802).

HUMAN AND ANIMAL RIGHTS

No animals were used in this research. All human research procedures followed were in accordance with the ethical standards of the committee responsible for human experimentation (institutional and national) and with the Helsinki Declaration of 1975, as revised in 2013.

CONSENT FOR PUBLICATION

Written Informed consent was obtained from all participants.

STANDARDS OF REPORTING

COREQ guidelines were followed.

AVAILABILITY OF DATA AND MATERIALS

The data supporting the findings of this study are available from the corresponding author [T.I] upon reasonable request with the approval of the Mie Prefectural College of Nursing Research Ethics Committee.

FUNDING

This study was funded by JSPS KAKENHI (Grant Number JP15K20740).

CONFLICT OF INTEREST

The authors declare no conflict of interest with this study.

ACKNOWLEDGEMENTS

The authors acknowledge the contribution of all participants in this study.

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