

Socio-demographic and Obstetric Factors Influencing Anticipatory Self-efficacy of Pregnant Women in Coping with Second Stage of Labour Pain in State Hospital, Ogun State

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Abstract: *This study examined the socio-demographic and obstetric factors influencing the anticipatory self-efficacy of pregnant women in coping with labour pain during the second stage of labour at State Hospital, Ijaiye, Abeokuta, Ogun State. The objectives were to assess how socio-demographic variables such as age and education affect self-efficacy, and to explore the relationship between obstetric factors particularly parity and previous labour experiences*

and women's confidence in managing labour pain. A non-experimental descriptive design was adopted, and 136 antenatal clinic attendees who met specified inclusion criteria participated, with 125 correctly completed questionnaires analysed. Data were collected using a modified and validated version of the Childbirth Self-Efficacy Inventory (CBSEI), translated into Yoruba for contextual relevance. Descriptive and inferential statistics, including chi-square, ANOVA, and t-tests, were used to analyse responses. The results indicated a statistically significant relationship between age, educational level, and self-efficacy ($\chi^2 = 23.996$, $p = 0.004$). Obstetric factors also showed significant influence: women with higher parity and positive previous birth experiences reported higher self-efficacy scores ($\chi^2 = 41.765$, $p = 0.000$). The overall mean self-efficacy score was 47.89, reflecting an above-average level of confidence among respondents. The study concludes that socio-demographic and obstetric histories are crucial predictors of how pregnant women perceive and prepare for labour pain. It recommends tailored antenatal education, personalised maternity care, peer support mechanisms, and staff training to enhance psychological readiness and effective pain coping strategies.

Keywords: labour pain, self-efficacy, pregnancy, socio-demographic factors, obstetric history, antenatal care

INTRODUCTION

The second stage of labour is a particularly intense and painful phase that involves the descent and eventual birth of the baby, often accompanied by strong, frequent uterine contractions and significant perineal stretching (Adams et al., 2015). At this point, the pain is influenced by both anatomical and physiological changes such as pelvic pressure and the distension of surrounding structures. Women's responses during this stage vary greatly, some may scream, cry or wriggle uncontrollably, while others may endure in silence (Alehagen et al., 2015). These differences in reaction are shaped not only by physical conditions but also by psychological and socio-cultural contexts. Pain in the second stage, though a natural aspect of childbirth, can exert a considerable emotional toll. If not properly managed, it may hinder a woman's cooperation during delivery, and ultimately, her satisfaction with the childbirth experience (Ejioye & Gbenga-Epebinu 2021). This stage thus serves as a critical period in evaluating a woman's anticipatory self-efficacy, which refers to her confidence in managing labour pain based on perceived competence and expectations.

Self-efficacy theory offers a valuable lens to understand how women mentally prepare for and cope with labour pain, especially during the second stage (Conqueiro et al., 2017). According to Bandura (1997), self-efficacy comprises two main components: outcome expectancy (the belief that a particular behaviour will produce a specific outcome) and self-efficacy expectancy (the belief in one's ability to perform the behaviour). A pregnant woman may believe that breathing techniques or other non-pharmacological interventions can relieve pain, but unless she believes in her own ability to effectively apply these techniques during labour, her self-

efficacy remains low. Women with high anticipatory self-efficacy are more likely to remain calm and focused, thus experiencing less pain and emotional distress (Akute et al., 2024). On the other hand, low self-efficacy can lead to fear, a higher likelihood of requesting unnecessary caesarean sections, and poorer coping strategies. Unfortunately, many women in the study setting, despite receiving antenatal education, still find themselves inadequately prepared for the intense pain of the second stage of labour, suggesting that socio-demographic and obstetric factors may play a more defining role in shaping anticipatory self-efficacy (Bell & Anderson 2016).

Indeed, factors such as age, level of education, marital status, parity, previous birth experience, and socio-cultural background have been identified as significant determinants of a woman's self-efficacy during labour. (Bialas et al., 2024) For instance, multiparous women who have had prior positive childbirth experiences may feel more capable and confident in managing the pain of the second stage. Conversely, primiparous women or those with traumatic previous births may be more fearful and less prepared to cope. Socio-demographic factors such as younger maternal age or low educational attainment may also correlate with limited knowledge of coping strategies and reduced confidence in applying them. Moreover, cultural norms that portray childbirth as a painful, inevitable ordeal rather than a manageable experience can negatively shape a woman's expectations and readiness. Psychological support, education, and prior exposure to coping mechanisms are therefore essential in improving anticipatory self-efficacy and overall childbirth outcomes (Ferber et al., 2016).

Non-pharmacological pain relief methods such as breathing techniques, touch, music therapy, and warm compresses have been promoted as effective and safe alternatives during labour, particularly during the second stage when pharmacological options may be limited or contraindicated. Yet, the mere availability of these methods does not guarantee their effective use. Pregnant women must be equipped with the confidence and competence to apply these measures, particularly during the high-stress, high-pain context of the second stage. A woman's perception of control over her labour experience plays a central role here. Studies have shown that women who believe in their ability to manage labour pain tend to report reduced anxiety and less intense pain, leading to more positive birth experiences (Fereshteh et al., 2017). This makes it imperative to assess not just women's knowledge, but also their belief in their ability to execute pain management techniques effectively.

Ultimately, investigating the socio-demographic and obstetric factors that shape anticipatory self-efficacy in the second stage of labour is crucial to improving maternal outcomes and reducing unnecessary interventions. In a setting like State Hospital, Ijaiye, Abeokuta, where cultural perceptions and access to labour support may vary, such research can help identify specific barriers and enablers to effective pain coping strategies. Enhancing pregnant women's anticipatory self-efficacy can reduce their emotional distress, reliance on surgical interventions, and overall dissatisfaction with the birthing process.

The main objective of this study was to examine the socio-demographic and obstetric factors influencing the anticipatory self-efficacy of pregnant women in coping with labour pain during the second stage of labour at State Hospital, Ijaiye, Abeokuta, Ogun State. Specifically, the study aimed to assess how socio-demographic characteristics affect anticipatory self-efficacy, and to determine the relationship between obstetric factors such as parity and previous labour experience and the ability of women to cope with labour pain. It also sought to ascertain the level of anticipatory self-efficacy among pregnant women during the second stage of labour.

METHODS

The methodology adopted for this study was structured to ensure systematic data collection and analysis that would provide credible insights into the anticipatory self-efficacy of pregnant women in coping with labour pain during the second stage of labour. A non-experimental descriptive research design was employed, which is appropriate for studies aiming to observe and describe characteristics of a population without manipulating variables. The choice of design allowed for the objective measurement of socio-demographic and obstetric factors that could influence labour pain coping strategies among the selected participants. This approach helped capture the natural variations in experiences and perceptions among the respondents in their antenatal setting.

The population for this study consisted of pregnant women attending the antenatal clinic at State Hospital, Ijaiye, Abeokuta. The average monthly attendance was 180 women, which formed the sampling frame for the research. To ensure the relevance and quality of data, strict inclusion and exclusion criteria were established. Participants were eligible if they were multigravida with previous vaginal delivery, had no psychological issues during pregnancy, and had experienced neither precipitate nor prolonged labour. They also must have delivered a healthy, live foetus previously. Women were excluded if they had any existing medical or psychiatric conditions, or complications requiring caesarean section. These criteria ensured that the focus remained on those whose past and present pregnancies allowed for a standard evaluation of self-efficacy in labour pain management.

To determine the sample size, the researcher employed the Scheaffer, Mendenhall, and Ott (2012) formula. With an average population size of 180 and a desired margin of error of 0.05, the calculated sample size was 124. To account for possible attrition, an additional 10% was added, bringing the total sample size to 136 participants. A convenience sampling technique was used to select participants from the antenatal clinic, specifically those who met the inclusion criteria and were willing to participate. Although convenience sampling may limit generalisability, it was practical for reaching the targeted population within the given hospital setting.

Data collection was facilitated through an adapted and standardised questionnaire. This instrument, which had been previously validated in studies conducted in Northern Ireland and

Australia, was modified to suit the local context. It consisted of three sections: Section A captured socio-demographic data, Section B gathered obstetric history, and Section C included an adapted version of the Childbirth Self-Efficacy Inventory (CBSEI). Although the original CBSEI contained 62 items across four subscales, only two parts relevant to this study were utilised. To enhance accessibility and understanding, particularly among non-English speakers, the questionnaire was translated into Yoruba while preserving the original meaning of the items. Five research assistants were trained by the researcher to ensure consistency in administering the instrument and maintaining the confidentiality and anonymity of the participants. Out of the 136 questionnaires distributed, 125 were correctly filled and returned, constituting the final dataset for analysis.

Data were analysed using the Statistical Package for Social Sciences (SPSS) version 27. Descriptive statistics such as frequency, percentage, mean, and standard deviation were used to summarise the participants' characteristics and responses. Inferential statistics, including One-Way Analysis of Variance (ANOVA) and T-tests, were employed to determine the relationships between socio-demographic and obstetric variables and anticipatory self-efficacy. Ethical approval was obtained from relevant authorities before the commencement of the study. Participants were fully informed about the purpose of the research, and written consent was obtained. Anonymity and confidentiality were strictly maintained, and only women who were officially registered for antenatal care at the hospital participated. The comprehensive structure of the methodology ensured that the research was ethically sound, statistically reliable, and contextually appropriate for addressing the study's objectives

RESULTS

Table 1: Respondents Demographic Characteristics (N = 125)

N	Variable	Frequency	Percent (%)
1	Age	18-25yrs	20.8
		26-33yrs	36.8
		34-41yrs	30.4
		42yrs above	12.0
		Total	125
	Mean age = 33.128; Std. Dev. = 11.001		
2	Educational level	No formal educ.	8.8
		Primary educ.	34.4
		Secondary educ.	43.2
		Tertiary educ.	13.6
		Total	125
3	Religion	Christianity	60.8
		Islam	28.8
		Others	10.4
		Total	125
4	Monthly Income	No income	-

		10,000 or less	22	17.6
		10000-30000	54	43.2
		31,000 above	49	39.2
		Total	125	100.0
5	Parity	1	28	22.4
		2	55	44.0
		3	27	21.6
		4 and above	15	12.0
		Total	125	100.0

The demographic characteristics of the 125 respondents reveal that the majority (36.8%) are within the age range of 26–33 years, followed by those aged 34–41 years (30.4%), with a mean age of approximately 33 years (SD = 11.001), suggesting a relatively young adult population. In terms of educational attainment, most respondents have secondary education (43.2%), while only a small proportion have no formal education (8.8%), indicating a fair level of literacy among participants. Religious affiliation shows Christianity as the dominant religion (60.8%), followed by Islam (28.8%), and a minority adhering to other faiths (10.4%). Regarding monthly income, the largest group earns between ₦10,000 and ₦30,000 (43.2%), and a notable 39.2% earn above ₦31,000, pointing to a modest economic standing overall. In terms of parity, most respondents have had two children (44%), while 22.4% have one child, suggesting a moderate level of reproductive experience among the population.

Table 2: The socio-demographic relationship of anticipatory self-efficacy of pregnant women in coping with labour pain in second stage of labour

N	Variable		Frequency	%	X ²	Sig
1	Age	18-25yrs	26	20.8	23.996	0.004
		26-33yrs	46	36.8		
		34-41yrs	38	30.4		
		42yrs above	15	12.0		
2	Educational level	No formal educ.	11	8.8		
		Primary educ.	43	34.4		
		Secondary educ.	54	43.2		
		Tertiary educ.	17	13.6		
		10,000 or less	22	17.6		
		10000-30000	54	43.2		
		31,000 above	49	39.2		

Table 2 shows that the chi-square value obtained for socio-demographic factors are ($\chi^2 = 23.996$, $p = .004$) at the significant levels of less than 0.05. Since these p-values were less than 0.05 values, it could be said that age and educational level have relationship with anticipatory self-efficacy of pregnant women in coping with labour pain in second stage of labour.

Table 3: Analysis output for significant relationship between the obstetric factors and anticipatory self-efficacy of pregnant women in coping with labour pain in second stage of labour

Variable	Category	N	Mean	X ²	p-value
Obstetric factors and coping with labour pain in second stage of labour	1	28	44.090	41.765	.000
	2	55	47.342		
	3	27	50.221		
	4 and above	15	49.911		
Previous labour experience	Positive	79			
	Negative	46			

Table 3 shows a statistical significant relationship between the obstetric factors and anticipatory self-efficacy of pregnant women in coping with labour pain in second stage of labour. This is so because the calculated chi-square value of 41.765 is significant at the p-value of less than .05 (.000). Going through the mean scores of self-efficacy of pregnant women in coping with labour pain in second stage of labour it could be seen that those that had more than a child and had positive labour experience have higher anticipatory self-efficacy in coping with labour pain in second stage of labour.

Table 4: Information on the anticipatory self-efficacy of coping with labour pain among pregnant women in the second stage of labour

Self-efficacy level	Category of scores	Second stage of labour	
		Freq	%
Low	1-25	35	28.0
Average	26-50	69	55.2
High	51-75	21	16.8
Total		125	100
Mean		47.891	
Standard dev.		11.973	

Table 4 presents the level of anticipatory self-efficacy of coping with labour pain among pregnant women in the second stage of labour. The respondents' level of anticipatory self-efficacy of coping with labour pain in the second stage of labour was on the average. The mean score was 47.891 which is equivalent to 63.9%. Thus, it could be said that the level of self-efficacy in coping with labour among the participants in the second stage of labour was above average. This is because their mean score is higher than 50%.

Hypotheses Testing

Ho1. There is no significant difference in the parity and anticipatory self-efficacy of coping with labour pain in the in second stage of labour among pregnant women

Table 5: One Way Analysis of Variance (ANOVA) analysis on the difference in the parity and anticipatory self-efficacy of coping with labour pain in the in second stage of labour among pregnant women

Sources of Variance	Sum of Squares	Df	Mean Square	F	Sig.
Between Groups	57.900	1	57.900	3.332	.017
Within Groups	2137.371	123	17.377		
Total	2195.271	124			

In order to assess the significant difference in the parity and anticipatory self-efficacy of coping with labour pain in the in second stage of labour among pregnant women, one way Analysis of Variance (ANOVA) was the main statistical method used. The calculated value of $f = 3.332$ was significant at 0.017 alpha level indicated that there is a significant difference in the parity and anticipatory self-efficacy of coping with labour pain in the in second stage of labour among pregnant women. Therefore, the earlier set null hypothesis was rejected while the alternative one is accepted.

Ho2. There is no significant difference between the previous labour experience and anticipatory self-efficacy of coping with labour pain in the second stage of labour among pregnant women

Table 6: Independent t-test to shows the difference between previous labour experience and anticipatory self-efficacy of coping with labour pain in the second stage of labour among pregnant women

	N	Mean	Std. Deviation	Std. Error Mean	df	T	Mean diff	Sig
Positive	79	47.449	6.755	1.001				
Negative	46	39.987	8.987	.976	123	4.154	7.462	.000

Results in Table 6 indicate a significant difference between previous labour experience and anticipatory self-efficacy of coping with labour pain in the second stage of labour among pregnant women ($t = 4.154$, $df = 123$, mean diff. = 7.462, $p = 0.00$). Hence, the earlier set null hypothesis that stated that "There is no significant difference between the previous labour experience and anticipatory self-efficacy of coping with labour pain in the second stage of labour among pregnant women" was rejected while the alternate one is sustained.

DISCUSSION OF FINDINGS

The findings of this study revealed that both age and educational level are significant socio-demographic correlates of anticipatory self-efficacy in coping with labour pain in the second stage of labour. While earlier studies, such as those by Korn et al. (2021) and Isgut et al. (2017),

argue that there is no consistent link between self-efficacy and socio-demographic characteristics like age, education, or occupational status, this study presents a more comprehensive view. It suggests that in the context of the second stage of labour, women's age and educational status indeed play a significant role. Women with higher educational qualifications are better equipped to understand the childbirth process, prepare adequately, and possibly adopt effective coping mechanisms. Supporting this notion, Akute et al. (2024), confirmed that educated women are about two times more likely to be well-prepared for childbirth. Similarly, Moran et al. (2021) and Mroz et al. (2023) found that educated women had a 2.5 times higher likelihood of being prepared for delivery, reinforcing the idea that knowledge, empowerment, and awareness stemming from formal education play crucial roles in labour self-efficacy.

In terms of obstetric factors, this study found a statistically significant relationship between previous obstetric experiences and anticipatory self-efficacy during the second stage of labour. This aligns with earlier findings by Said et al. (2022) and Nori et al. (2023), who reported that women who had previous childbirth experiences especially those who had spontaneous vaginal deliveries were more confident in their ability to manage pain during labour. These multiparous women may have developed effective coping mechanisms based on prior positive experiences, thus enhancing their anticipatory self-efficacy. On the contrary, women with a history of complicated deliveries or caesarean sections were more likely to exhibit lower levels of self-efficacy (Salanska & Moravcova 2019; Bell et al., 2016). This indicates that the psychological imprint left by past childbirth experiences plays a vital role in shaping a woman's confidence in facing future labours, particularly the intense second stage where the pain peaks and active pushing is involved.

The study also discovered that the respondents' overall anticipatory self-efficacy during the second stage of labour was above average. This relatively high level of confidence could be attributed to their preparedness and positive expectations, which may have been shaped during the first stage of labour. Anticipatory self-efficacy, by nature, is rooted in one's belief in their capacity to execute behaviours necessary to produce specific performance attainments. When applied to childbirth, especially during the second stage, it becomes evident that a woman's self-perceived control over the birthing process has a substantial impact on her labour experience. This aligns with Schwartz et al. (2015), who identified a sense of control and the ability to adjust positions and respond to bodily cues during labour as critical factors for a positive birth experience. Similarly, Ejioye and Gbenga-Epebinu et al. (2021) found that higher self-efficacy scores were associated with reduced pain perception, while Akute et al. (2024) noted that psychological readiness also enhances coping ability. Therefore, it can be inferred that anticipatory self-efficacy is a multidimensional construct shaped by both internal (psychological preparedness) and external (educational and obstetric) factors.

Parity was also shown to influence anticipatory self-efficacy in the second stage of labour. A significant difference was noted between multiparous and primiparous women, with the former

demonstrating higher self-efficacy. This is unsurprising given that women who have undergone childbirth before are more likely to have realistic expectations of the labour process and can draw on personal strategies that worked previously. These findings corroborate the work of Nori et al. (2023), who noted that multiparous women often report greater self-efficacy and less perceived pain. Mroz et al. (2023) also highlighted the importance of past experiences in predicting confidence during childbirth. The implication here is that interventions aimed at boosting self-efficacy in primigravida women could benefit from including birth preparedness training and exposure to realistic birthing scenarios, such as through antenatal classes, role play, or storytelling sessions from experienced mothers.

Finally, the role of previous labour experience was examined in relation to self-efficacy during the second stage of labour. The findings revealed a significant difference in anticipatory self-efficacy between first-time mothers and those with prior birth experiences. Women who have previously given birth often approach labour with a mindset akin to preparing for an athletic challenge. The study of Bell et al. (2016) support the idea that these women often channel their prior experiences to build mental and emotional resilience, viewing childbirth as a manageable and even empowering experience. On the other hand, primiparous women may approach the second stage of labour with greater uncertainty and fear, owing to a lack of prior exposure. Ejioye and Gbenga-Epebinu (2021) also observed that mental conditioning and a proactive mindset significantly influence how women perceive and manage labour pain. Consequently, enhancing self-efficacy through antenatal education, psychological support, and practical guidance for first-time mothers can contribute significantly to improved labour experiences during the second stage.

In summary, the findings of this study underscore the importance of age, education, obstetric history, parity, and prior labour experiences in shaping anticipatory self-efficacy for coping with pain during the second stage of labour. These insights carry significant implications for maternal healthcare providers and antenatal educators, as targeted interventions to boost self-efficacy particularly among less experienced and less educated pregnant women can meaningfully improve the childbirth experience. By equipping women with the necessary psychological tools and information, healthcare professionals can enhance women's confidence, reduce anxiety, and ultimately contribute to more positive labour outcomes

CONCLUSION

The study clearly demonstrates that a pregnant woman's ability to anticipate and effectively cope with labour pain in the second stage of labour is significantly influenced by various socio-demographic and obstetric factors. Specifically, age and educational level were found to have a notable impact, with higher education appearing to enhance self-efficacy. Additionally, obstetric history, particularly parity and previous labour experiences, emerged as crucial determinants, as those with more childbirth experience and positive past experiences showed higher levels of confidence in managing labour pain.

Recommendations

1. Healthcare providers should enhance antenatal classes to include specific modules on labour pain management and coping strategies, especially targeting first-time mothers and those with limited formal education to boost their anticipatory self-efficacy.
2. Maternity care should be personalised by assessing each pregnant woman's obstetric history and providing tailored support, particularly for those with negative previous labour experiences, to help improve their psychological readiness for childbirth.
3. Hospitals and antenatal clinics should create opportunities for expectant mothers to interact with peers who have had positive labour experiences, as hearing encouraging stories can help boost confidence and reduce fear of labour pain.
4. Midwives and other maternity care providers should receive continuous training on how to recognise and address emotional and psychological barriers that may affect a woman's self-efficacy in labour, enabling more holistic and supportive care during pregnancy.

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