ORIGINAL ARTICLE

Silent Echoes: Understanding the unspoken pschological impact of child birth in a Pakistani tertiary care Hospital

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Abstract:

Aim: This paper explores the psychological impact of birth experiences on women, examining maternal identity, emotional well-being, and future interactions with babies, examining various feelings and responses.

Material and Methods: The study examines the relationship between maternal age, education, pregnancy parameters, and childbirth experiences, with the dependent variable being memories of labor. Data was collected through a questionnaire, and post-childbirth feedback was documented. Chi-square tests were used to evaluate the relationship between childbirth experience, pregnancy parameters, and memories of labor, with a significance level of < 0.05.

Results: There was a statistically significant association between level of control of women during childbirth with low-risk pregnancies (p: 0.001), duration of labour (p: <0.001), and mode of birth (p: <0.001). Association of women's participation during childbirth was statistically significant with high-risk pregnancies (p: <0.001), duration of labour (p: <0.001), no oxytocin augmentation (p: <0.001), and mode of birth (p: <0.001). There was a statistically significant association found between professional support given during childbirth and high-risk pregnancies (p: <0.001), duration of labour (p: <0.001), and mode of birth (p: <0.001).

Conclusion: The study indicates a link between delivery method and childbirth satisfaction, emphasizing the need for improved midwife support and active mother participation.

Keywords: Childbirth experience, emotional well-being, pregnancy parameters, psychological impact.

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Introduction:

A woman's birth is a dramatic and transforming life event that covers a wide variety of emotions and experiences. Aside from the physical components, there has been a rising interest in the possible psychological consequences of delivery as a traumatic event in recent years. The way a woman gives birth can have an impact on her sense of self, her bond with her infant, and her attitude toward parenthood.[1] Psychological birth trauma, also known as traumatic childbirth, is a situation in which the woman has experienced distress as a result of injury to herself and her baby, or pain or sorrow of such magnitude that it may predispose the mother to a traumatic condition with long-term psychological and/or physical consequences.[2] According to Creedy et al., one out of every three pregnancies might result in psychological birth trauma for the mother.[3] The incidence of trauma symptoms during delivery is between 30 to 50% in research conducted in different age and income groups.[4]

In developed nations, negative outcomes from childbirth are uncommon and unanticipated. However, there are also instances of painful delivering experiences that affect mother and baby morbidity and mortality and may turn a woman's anticipated positive experience of childbirth into a traumatic one.[5,6] Some of these delivery scenarios fulfill the Diagnostic and Statistical Manual of Mental Disorders (DSM-5) criteria for traumatic experiences.[6,7] Maternal mental health is a worldwide health issue, according to

Table 1: Baseline characteristics of participants

Characteristics	Frequency (%)
Maternal age (years)	
20 – 24	10 (7.5%)
25 – 29	68 (50.7%)
30 – 34	56 (41.8%)
Education	
None	18 (13.4%)
High school	76 (56.7%)
Undergraduate	30 (22.4%)
Postgraduate	10 (7.5%)
Level of risk in pregnancy	
Low-risk	102 (76.1%)
High-risk	32 (23.9%)
Parity	
Nulliparous	24 (17.9%)
1-2 Children	70 (52.2%)
More than or equal to 3 children	40 (29.9%)
Gestational diabetes mellitus	
Yes	124 (92.5%)
No	10 (7.5%)
Gestational age	
Less than 37 weeks	28 (20.9%)
More than or equal to 37 weeks	106 (79.1%)
Mode of delivery	
Spontaneous vaginal delivery	92 (68.7%)
Assisted vaginal delivery	12 (9%)
Cesarean section	30 (22.4%)
Labour duration	
None	12 (9%)
Less than 12 hours	90 (67.2%)
More than 12 hours	32 (23.9%)
Type of Anesthesia given	
Local	94 (70.1%)
Epidural	40 (29.9%)
Oxytocin augmentation	68 (50.7%)
No oxytocin augmentation	66 (49.3%)

the World Health Organisation. Undiagnosed mental health disorders affect 10% of pregnant women and 13% of new moms.[8]

It receives little attention in today's health systems, with a focus on the mother's physical health, as evidenced by existing pregnancy monitoring protocols; thus, this paper aims to delve into the intricate landscape of the psychological impact of childbirth experiences (CBE) on women, shedding insight on the various ways in which the birth experience might impact maternal identity, emotional well-being, and future interactions with their babies by studying a spectrum of feelings and responses that women may experience during and after childbirth.

Material and Methods:

The independent variables in the study are maternal age, education, pregnancy parameters, and the CBEs. The study conducted during the period of January 2022 till December 2022. The dependent variable is the memories of labour. The questionnaire consisted of maternal age (years), education; and pregnancy parameters such as level of risk in pregnancy, parity, gestational diabetes mellitus (GDM), gestational age (weeks); labour duration, and type of anesthesia given. CBE was noted through the level of support (helpless, just satisfied, happy), labour experience (horrible, average, good), participation, and professional support (bad, okay, good). Post-childbirth feedback was also documented by asking if the patient had flashbacks and if were they planning to have another baby after this CBE.

Analysis of the data was done on SPSS v.26. Data was descriptively stated through frequencies and their percentages. Chi-square tests of association were applied to evaluate the relationship of CBE with the pregnancy parameters and memories of labour. A p-value of less than 0.05 was considered as the level for the significance of the variables.

Results:

Of the 134 participants enrolled, 50.7% were around 25 to 29 years of age. Mostly had education till high school (56.7%). We found more women withlow-risk pregnancies (76.1%) and most had 1 to 2 children previously (52.2%). Gestational diabetes cases were in numbers (92.5%). There were 79.1% women with agestational age of ≥ 37 weeks. Approximately 68.7% women had a spontaneous vaginal delivery (SVD) with labour duration of less than 12 hours (67.2%). Local anesthesia was given in 70.1% women. Table 1 contains all the descrip-

Table 1: Overall childbirth experience of participants

Childbirth experience	Frequency (%)
Level of control (own capacity)	
Helpless	26 (19.4%)
Just satisfied	46 (34.3%)
Happy	62 (46.3%)
Labour experience	
Horrible	48 (35.8%)
Average	52 (38.8%)
Good	34 (25.4%)
Participation	
Yes	86 (64.2%)
No	48 (35.8%)
Professional support	
Bad	12 (9%)
Okay	50 (37.3%)
Good	72 (53.7%)
Flashbacks	
Yes	56 (41.8%)
No	78 (58.2%)

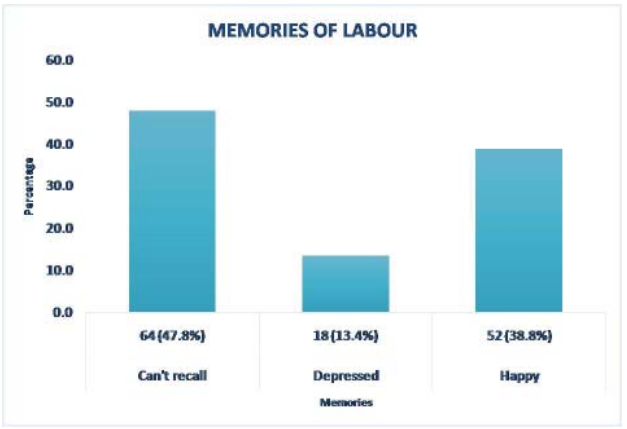

Figure 1: Memories of labour in participants

tive details.

Overall, 46.3% women were happy with their level of control during childbirth. However, 38.8% feltan averagelabour experience. Around 64.2% women participated and had good professional support (53.7%). More than half of the females (58.2%) had no flashbacks of the CBE. Further details can be seen in table 2.

Table 3. consists of the association between pregnancy parameters and the CBE of the women. There was a statistically significant association between level of control of women during childbirth with low-risk pregnancies (p: 0.001), duration of labour (p:<0.001), and mode of birth (p:<0.001). Regarding the level of control, 54.9% of women with low-risk pregnancies were happy whereas 43.75% were just satisfied with their own capacity during childbirth. Almost 46.6% women with <12 hours and 62.5% women with >12 hours of labour duration were happywiththe level of control during their childbirth. No female was happy who had assisted vaginal delivery (AVD) and C-section (CS). Instead, there were a lot of women who felt helpless when they had AVD (83.3%). There was not a single womanin SVD who felt helpless and 67.39% felt happy.

Association of women participation during childbirth was statistically significant with high-risk pregnancies (p:<0.001), duration of labour (p:<0.001), no oxytocin augmentation (p:<0.001), GDM (p:0.014), and mode of birth (p:<0.001). There was no participation seen from women in high-risk pregnancies. Females with <12 hours of labour duration participated more (71.11%) while 68.75% did not participate when labour duration was >12 hours.There was more participation when oxytocin was not augmented(79.41%).All the females with GDM participated. Females who had SVD participated the most (63.04%). All women who had AVDs did not participate.

There was a statistically significant association found between professional support given during childbirth and high-risk pregnancies (p:<0.001), duration of labour (p:<0.001), GDM (p:0.009), and mode of birth (p:<0.001). Good professional support was observedin all the high-risk pregnancies, women with no labour duration, and women with GDM. Women who had CS experienced good professional support (93.3%) with not a single badencounter.

There was a significant association between memories of labour and women's own capacity (p:0.024), participation (p:0.001), professional support (p: <0.001), labour experience

Table 3: Associations of pregnancy parameters with childbirth experience

	Level of control (own capacity)			
Pregnancy parameters	Helpless (n:26)	Just satisfied (n:46)	Happy (n:62)	p-value*
Low-risk pregnancy(n:102)	14 (13.73%)	32 (31.37%)	56 (54.90%)	0.001
High-risk pregnancy (n:32)	12 (37.5%)	14 (43.75%)	6 (18.75%)	
Duration of labour				
None (n:12)	8 (66.6%)	4 (33.3%)	0	<0.001**
<12 hours (n:90)	12 (13.33%)	36 (40%)	42 (46.66%)	
>12 hours (n:32)	6 (18.75%)	6 (18.75%)	20 (62.5%)	
Oxytocin augmentation (n:66)	14 (21.21%)	22 (33.33%)	30 (45.45%)	0.923
No oxytocin augmentation (n:68)	12 (17.64%)	24 (35.29%)	32 (47.06%)	
Gestational diabetes mellitus				
Yes (n:10)	2 (20%)	6 (60%)	2 (20%)	0.140**
No (n:124)	24 (19.35%)	40 (32.25%)	60 (48.38%)	
Gestational age				
< 37 weeks (n:28)	8 (28.57%)	10 (35.71%)	10 (35.71%)	0.309
≥ 37 weeks (n:106)	18 (16.98%)	36 (33.96%)	52 (49.05%)	
Mode of birth				
SVD (n:92)	0	30 (32.60%)	62 (67.39%)	<0.001**
AVD (n:12)	10 (83.33%)	2 (16.66%)	0	
C-section (n:30)	16 (53.33%)	14 (46.67%)	0	
	Participation			
	Yes (n:86)	No (n:48)		
Low-risk pregnancy	54 (52.94%)	48 (47.05%)		<0.001
High-risk pregnancy	32 (100%)	0		
Duration of labour				
None	12 (100%)	0		<0.001**
<12 hours	64 (71.11%)	26 (28.88%)		
>12 hours	10 (31.25%)	22 (68.75%)		
Oxytocin augmentation	32 (48.48%)	34 (51.51%)		<0.001
No oxytocin augmentation	54 (79.41%)	14 (20.58%)		
Gestational diabetes mellitus				
Yes	10 (100%)	0		0.014**
No	76 (61.29%)	48 (38.70%)		
Gestational age				
< 37 weeks	20 (71.42%)	8 (28.57%)		0.389
≥ 37 weeks	66 (62.26%)	40 (38.74%)		
Mode of birth				
SVD	58 (63.04%)	34 (36.96%)		<0.001**
AVD	0	12 (100%)		
C-section	2 (6.66%)	28 (93.34%)		
	Professional support			
	Bad (n:12)	Okay (n:50)	Good (n:72)	
Low-risk pregnancy	12 (11.76%)	50 (49.01%)	40 (39.21)	<0.001**
High-risk pregnancy	0	0	32 (100%)	
Duration of labour				
None	0	0	12 (100%)	<0.001**
<12 hours	0	30 (33.33)	60 (66.67)	
>12 hours	12 (37.5%)	20 (62.5%)	0	
Oxytocin augmentation	8 (12.12%)	28(42.42%)	30(45.45%)	0.131
No oxytocin augmentation	4 (5.88%)	22 (32.35%)	42 (61.76%)	
Gestational diabetes mellitus				
Yes	0	0	10 (100%)	0.009**
No	12 (9.68%)	50 (40.32%)	62 (50%)	
Gestational age				
< 37 weeks	4 (14.28%)	10 (35.71%)	14 (50.01%)	0.510**
≥ 37 weeks	8 (7.54%)	40(37.73%)	58 (54.73%)	
Mode of birth				
SVD	10 (10.86%)	42 (45.65%)	40 (43.49%)	
AVD	2 (16.66%)	6 (50%)	4 (33.34%)	
C-section	0	2 (6.67%)	28 (93.33%)	

SVD: spontaneous vaginal delivery, AVD: assisted vaginal delivery

**chi-square test, **Fisher's Exact Test*

(p:<0.001), and flashbacks (p: 0.006). The women who could not recall their labour memories were happy with their own capacity during childbirth (58.06%). Participation was also not seen in them (54.16%) and 66.67% observed bad professional support. While women who had happy memories of labourparticipated the most (48.83%). No woman with good labour experience had depressed memories of labour. table 4 represents further details.

Discussion:

The current study observed that psychological impact measured through labor memorieswas associated with the CBE. Women who participated more during childbirth also had happy labour memories. Also, women who had good labour experience either couldn't recall or had happy labour memories. Depressed memories were not seen amongthem.

Happiness with one's behavior during childbirth is one part of satisfaction with the experience.[9] How much a woman maintains control over her behavior determines how satisfied she is with her behavior. The main focus of this control is the control of labour pain. Several women express worry about having uncontrollable responses when giving birth, especially in response to pain. The extent to which a woman can control her reaction to various levels of pain during childbirth might eventually influence her level of self-assurance, self-control, and contentment with childbirth.[10-12] In this study, women with a longer duration of labour were happy with their level of control during childbirth. Similar to our findings, a study done in Slovakia found significance in women's level of control when labour duration was >12 hours.[13] Ghanbari-Homay and colleagues found contrary results with women with shorter duration of labour more in control during labour.[14] Another multi site study noticed that most women who had<12 hours of labour duration had a better level of control.[15] Women who had SVD were happy with their level of control during labour. Zhu et al., Kalok et al., and Ahmadpour et al. got similar outcomes with SVD related to better control.[15-17]

Table 4: Psychological impact of women during and after childbirth

Childbirth experience	**Memories of labour**			**P-value***
Own capacity	Can't recall	Depressed	Happy	
Helpless (n:26)	14 (53.84%)	4 (15.38%)	8 (30.78%)	0.024**
Just satisfied (n: 46)	14 (30.43%)	10 (21.73%)	22(47.84%)	
Happy (n: 62)	36 (58.06%)	4 (6.45%)	22 (35.49%)	
Participation				
No (n: 48)	26 (54.16%)	12 (25%)	10 (20.84%)	0.001
Yes (n: 86)	38 (44.18%)	6 (6.97%)	42 (48.83%)	
Professional support				
Bad (n: 12)	8 (66.67%)	4 (33.33%)	0	<0.001**
Okay (n: 50)	20 (40%)	12 (24%)	18 (36%)	
Good (n: 72)	36 (50%)	2 (2.78%)	34 (47.22%)	
Labour experience				
Horrible (n: 48)	18 (37.5%)	14 (29.16%)	16 (33.34%)	<0.001**
Average (n: 52)	32 (61.54%)	4 (7.7%)	16(30.76%)	
Good (n: 34)	14 (41.17%)	0	20 (58.83%)	
Flashbacks				
No (n: 78)	34 (43.6%)	6 (7.7%)	38 (48.7%)	0.006
Yes (n: 56)	30 (53.57%)	12 (21.43%)	14 (25%)	
Planning to have another baby				
Never (n: 36)	14 (38.89%)	2 (5.56%)	20 (55.55%)	0.108
Lately (n: 56)	26 (46.43%)	10 (17.85%)	20 (35.72%)	
Soon (n: 42)	24 (57.14%)	6 (14.3%)	12 (28.56%)	

**chi-square test, **Fisher's exact test*

Participants who experienced AVD and CS felt either helpless or were just satisfied with their self-control in our study. Literature from Australia and Scandinavianregionsconcludedthatnegative emotions and thoughts wereseen in women undergoing CSsorAVDs.[18,19] Due to this, women endured stressful CBEwhichaffected their self-control and worthiness.[20,21]

According to studies, the ability to move freely during labour is a quality that may be used to gauge how well women are cared for throughout delivery and how satisfied they are with the experience.[22,23] More participation was seen in women who had <12 hours of labour duration. Gonzálezet al. also found increased participation of women with ≤12 hours labour duration.[24] Women who had no oxytocin augmentation were participating more in the current study. Contrasting results were seen in the past with women's participation increasing with oxytocin augmentation.[17] Participation was seen more in women who went through SVD. This was congruent with a previous study.[17] However, another study observed acorrelation between increased participation in instrumental delivery and CSs.[13] The probable reason for the disparity in the results could be the number of respondents. Previous studies had more respondents than our study.

Women's perceptions of childbirth may be severely impacted by the midwife's professional approach, which is a significant element in how a woman experiences childbirth.[5,12,25] All high-risk pregnancies, women without a labour duration, and women with GDM received good professional support in our study. CS patients received excellent professional care and never had a negative experience. Literature reportedsimilar results with operative procedures linked with good professional support.[13] We can hypothesize that this discrepancy is caused by the fact that there isn't a direct correlation between birth experience and manner of birth, but rather that there is a mediation between the two by psychological factors that are both context- and individually related. For instance, if a woman feels unsuccessful or has a different birth experience than anticipated, she can have a negative perception of an urgency/emergency CS or an instrumental birth.[26] However, it's also likely that women who had CS or vacuum assistance during childbirth felt adequately supported by the medical staff, which would make their experience as a whole good.[26] We need to look at this issue more.

Limitations include the fact that the questionnaire's validity and reliability have not been tested in our socio-cultural setting. As a result, we cannot say with certainty if the tool was applied as the questionnaire's creator intended or whether it was sufficiently accurate and dependable in Pakistan's environment. Only the altered version of the questionnaire was used for the investigation. We think that despite its limitations, the study highlights the significance of researching women's CBE and that the continuation of this limited research may allow for the discovery of additional, unexplored elements influencing

women's experience of childbirth.

Conclusion:
Women had considerably higher levels of happiness after having a SVD, which indicated a relationship between the manner of delivery and overall satisfaction with childbirth. Based on the results in the specific domains of the CBE questionnaire, we discovered that to create a positive experience, and thus overall satisfaction with childbirth, it is necessary to increase awareness of improving the professional support provided by midwives (i.e., through a more sensitive approach to mothers), of promoting the active participation of the mother during childbirth. To establish evidence-based maternal care that can be included in Pakistan's healthcare system, additional study is required to ascertain women's experiences and general satisfaction with childbirth, as well as any associated issues.

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Role and contribution of authors:
Shazia Sultana, conceived, concept design and definition of intellectual content, literature search, data acquisition.

Khasheaa Nadeem, did literature search and manuscript preparation did final layout and data entry.

Shua Nasir, did write up, manuscript preparation, final layout.

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Mehreen Yousaf Rana, literature search and data entry.

Huma Muzaffar, data entry and final layout.

Samina Kamal, data entry and final layout.

Rubina Hussain, read and approved for final manuscript.

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