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Original Article

Experience of Women with First Time Placenta Previa

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1.ABSTRACT

Background: Inadequate antenatal preparations and lack of knowledge and experience are the most frequent problems faced pregnant women with high risk pregnancy such as placenta previa. This study aimed to gain insight into women's experience with first time placenta previa. Research design: A descriptive cross-sectional designs was utilized in this study. **Subjects and method**: A purposive sample of 153 women with first time placenta previa in Obstetric and Gynecological departments at Mansoura University Hospitals, El- Mansoura City, Dakhalia Governorate, Egypt. Tools of data collection: Two tools were utilized for data collection. Tool one: Sociodemographic and reproductive characteristics. Tool two: Pregnant women's knowledge and experience concerning placenta previa. These tools developed by the researcher. **Results**: Two thirds of women experienced sadness and worry as the first reaction when they knew they had placenta previa, but at the end most of them adapted as a result of increase knowledge by obstetrician. Most of them received support from their mothers and husbands. **Conclusion**: Majority of studied women were satisfied with healthcare receiving in outpatient and inward, and adapted with placenta previa at the current time of pregnancy. **Recommendations**: Enhance communication between maternity care providers and women with placenta previa to facilitate the women adaptation and increase awareness of the women about placenta previa. Further researcher: Effect of educational programs on pregnant women`s experience regarding placenta previa.

Keywords: Experience – Placenta previa – Pregnancy

2.Introduction:

Experience is a gained practical knowledge, skill, or practice derived from direct observation or participation in a particular activity. Women's experience during pregnancy differs from one woman to another and from pregnancy to pregnancy for the same woman **(Vignato et al., 2021).** Pregnancy and childbirth are a long journey that includes physiological, psychological, and emotional changes that can have a favorable or bad impact on the woman's life, the baby's life, and the family's life **(Topalidou, Thomson & Downe, 2020)**.

Although pregnancy is a healthy state, it considered high-risk when there are complications during the antepartum period, or caused by preexisting diseases arises during the pregnancy that can harm the maternal and fetal environment **(Correa-de-Araujo & Yoon, 2021).** Antepartum hemorrhage is one of these complications that occur during pregnancy **(Hintze, 2019)**. Placenta previa is the cause of one third of antepartum hemorrhage. Placenta previa is implantation of placenta in the lower uterine segment over or near the internal cervical os **(Jauniaux, Moffett & Burton, 2020).**

In spite of hemorrhage caused by placenta previa is not a major cause of maternal mortality in high-income countries, it remains a major cause of maternal and fetal morbidity and mortality in low-income countries due to poor medical service utilization, a lack of blood transfusion, and logistical delays in operative management **(Owen, Cassidy & Weeks, 2021)**. Proper management of bleeding is imperative to avoid serious feto-maternal consequences and urgent intervention is required to reduce the negative outcomes of pregnancies complicated by PP **(Basavaradder, Singh & Singh, 2019).**

Inadequate antenatal preparations and lack of knowledge and experience are the most frequent problems faced pregnant women with high risk pregnancy such as placenta previa. So, continuous support of maternity team is critical to help the woman to gain her adaptation and enhance positive experience **(Nieto Calvache et al., 2021).** Meanwhile, measurement of women experience is a key step towards ensuring quality of care improvement to enhance this adaptation **(Das et al., 2022).**

2.2 Significance of the study

In Egypt, the prevalence of placenta previa was (1.3%) from total pregnant women admit to Sohag hospitals. Among placenta previa, (26.9%) had PA, (67.3%) the majority were living in urban setting, (21.2%) had a history of abortion and (17.3%) from newborn were admitted to neonatal intensive care unit (NICU) **(Ahmed, Aitallah, Abdelghafar & Alsammani, 2015).**

Another Egyptian prospective study conducted at Assiut University Hospitals, the incidence of PP from total cases is (1,7 %), among them (0,33%) had placenta accreta, (60.7%) had uterine artery ligation, while cesarean hysterectomy was performed for (11.3%), (11.7%) had bladder injury, (1.2%) had ureteric injury, (0.2%) had colon injury, (0.4%) had vascular injury and (0.8%) maternal mortality and (3.6%) neonatal cases needed admission to NICU **(Zakherah, Abdel-Aziz, Othman & Abbas, 2018**). So, the incidence of both PP and PA is very high in our locality due to increase CS rate.

A Prospective observational study was conducted in Obstetrics & Gynecology, Department, Mansoura University Hospitals, Egypt during the period from July, 2014 to December, 2015. The study included 115 cases. Mean age of cases was 31.1 years, mean gestational age at delivery was 36.8 weeks. Previous cesarean deliveries were reported in 93.9% of the cases. Abnormal placental adhesions were found in 30.4% **(Fyala, Mashaly, Nezar & Ashraf Ghanem, 2018).**

Peripartum hysterectomy was performed in 13 cases (11.3%). There were three cases of maternal mortality; one due to anesthetic complication, one due to uncontrolled atonic postpartum hemorrhage and the third was due to postoperative pneumonia. The mean gestational age at delivery was 36.82±1.6 weeks. There were 5 cases (4.3%) of IUFD and 2 cases (1.8%) of early neonatal deaths **(Fyala, Mashaly, Nezar & Ashraf Ghanem, 2018).**

So, the incidence of both PP and PA is very high in our locality due to increase CS rate. There are many studies that care about placenta previa as a medical condition, but this is the first Egyptian study care about experience of the women with placenta previa. For that, assessment of women knowledge and experience is important to detect the defect at first and enhance the women adaptation.

3.2 Aim of the study

The aim of the study is to assess the experience of women with first time placenta previa.

4.2 Research Question

What are women's experiences with first time placenta previa?

3. Methodology

1.3 Study design:

A descriptive cross-sectional design was utilized in this study.

2.3 Study Setting

This study was conducted at the obstetrics and gynecology wards of Mansoura University Hospitals, El-Mansoura city, Dakahlia governorate, Egypt. The hospital included four internal wards of obstetrics and gynecology named nine, ten, fifteen and eighteen. They are located at the 3rd and 4th floor in the hospital. Every ward contains from 26 to 30 beds and receives high risk pregnancy and postnatal conditions.

3.3 Study sample

The study subject included a purposive sample of 153 women who age above 18 years old, primiparouse and multiparouse women, diagnosed with placenta previa for first time and free from other medical and obstetric disorders but placenta previa.

4.3 Sample size

If the study has an 80.0 percent power, a precision/absolute error of 5%, and a type 1 error of 5%, the sample size will be computed as follows **(Sarojini & Radhika, 2016)**: Sample size = [(Z1-α/2)2.P(1-P)]/d2. Where, Z1-α/2 = is the standard normal variety, at 5% type 1 error ($p<0.05$) it is 1.96. So, Sample size = $[(1.96)^2. (0.90). (1-0.90)]/ (0.0475)^2 =153.2$

5.3 Tool of data collection

Two tools were used for data collection. They were developed by the researcher after reviewing the scientific literature. **Tool one:** It consisted of two parts: **Part one:** Sochiodemographic characteristics such as age, women education and occupation. **Part two:** Reproductive history such as gravidity, parity, history of abortion and mode of previous delivery. **Tool two:** It was an individualized in-depth interview to assess women`s experience regarding placenta previa such as their reaction when they knew, the supported person for her, maternal, fetal complications, self-care management for bleeding at home and adaptation.

6.3 Validity of the tool

Three specialists in the field of maternity and gynecological nursing examined the study tools for validity. Modifications were made in the final version of English based on expertise's suggestions, and a translated to Arabic tool was employed for data collecting. It was 30 questions have been reduced to 26 only.

7.3 Reliability of the tool

Cranach's alpha test for reliability and internal consistency was (0.864) for structure interview questionnaire tool, hence the tool showed high reliability.

8.3 Ethical Consideration

The Research Ethics Committee of Mansoura University's Faculty of Nursing granted ethical permission. Clarify to the women goal and nature of the study. An official letter from Mansoura University's Faculty of Nursing was sent to the manager of Mansoura University Hospitals and the head of Obstetrics and Gynecology departments to gain official authorization to conduct the study. The subjects were informed that participation in the study was voluntary and had the right to withdraw at any time with maintain the quality of useful care they received. After discussing the study's objective, all participants signed an informed written permission. Participants were promised that the acquired data would be kept private.

9.3 Research process

The research process was carried out through two phases; preparatory and operating phase. Preparatory phase included; reviewing literature, developing the study tools and pilot study, while the operating phase included; data collection and data analysis.

Preparatory Phase

Reviewing **literature;** regarding the various aspects of the study, the researcher evaluated relevant national and international literature as well as theoretical knowledge.

Developing tools; the researcher prepared articles, books, and journals in order to construct a data collection instrument.

A pilot study; it was carried out with 10% (15 pregnant women) to assess the tools' clarity and applicability, as well as to estimate the time required to respond to the tool. The results of the pilot study were not included in the sample size, and the tools were modified as a result of the paraphrase of several phrases, according to the analysis of the pilot results.

Operating phase

Data collection phase; Data were collected for six months in the period from January 2021 to the end of June 2021. The researcher was attended the obstetric departments three days per week (Saturday, Monday and Tuesday) until the calculated sample size was obtained.

Data Analysis phase; The information was sorted, structured, coded, and transferred into specially created formats for computer entry. SPSS version 22 was used for the statistical analysis. Frequencies and percentages were used to describe quantitative data. All continuous data were normally distributed and were expressed in mean ± standard deviation (SD)

4.Results

Table one showed that more than one quarter (28.1%) of the studied women aged from 25 – 30 years, and more than two-thirds of them (68.6%) were from rural areas. Regarding education, more than one quarter of the studied women was college graduated (26.8%) and the majority of them (85.0%) were housewives, and 63.4% reported enough income. Regarding husband's education 64.1% had secondary education, the majority of them (80.4%) were occupied free work, and 39.9% of them reported their husbands were smokers.

Table two clarified more than half (55.6%) of the pregnant women had gestational age from 33 to 37 weeks, and the majority of them (91.5%) were multigravidas. Among 153 of the studied pregnant women, more than one third of them (34.6%) reported history of abortion, and more than one quarter 28.3% reported the congenital causes were the history of abortion. Concerning the mode of previous delivery, nearly three quarters (72.6%) reported cesarean section, and 34.6% reported the interval between the past and current pregnancy was more than five years.

Figure one illustrated that nearly two fifths (38.6%) of the studied women had complete centralize placenta previa. Meanwhile, more than one fifth 22.2% was marginal placenta previa.

Table three clarified that 66.7% of the studied women reported that she knew she had placenta previa at first time during regular antenatal visits without vaginal bleeding. Also, more than one third of them (36.6 %, 35.3%, respectively) reported that sadness and worry were their reactions at first time when they knew. In addition, the table highlighted that 46.4% and 43.8 %, respectively of the studied women reported gained support from their husbands and mothers

and alarmingly the minority of them gained support from obstetric health care workers (7.2 % and 2.6 %, respectively of obstetricians and maternity nurses). Furthermore, more than two fifths 41.1% of them complained of anemia, 28.1% of the women complicated to placenta accreta, and 3.3% complicated fetal growth restriction.

Figure two illustrated the majority of the studied women (89.4%) experienced lower abdominal pain, and two thirds of them (66.2%) experienced vaginal bleeding and minority of them (7.9%) lower back pain.

Table four clarified three quarters 75.2% of the studied women reported the main care that provided during hospitalization were monitoring of blood pressure, and 67.3% of them reported she had hospitalized until delivery. In addition, most of women (99.3, 96.7%, respectively) reported that they were satisfied with healthcare receiving in outpatient and in ward.

Table five showed that the majority of the studied women were adapted with placenta previa at the current time of pregnancy and said that "Thank Allah, all of Allah's bids are good" and some of them reported "Obstetricians calmed me down", others said "I just jumped right to acceptance", "When I saw many women in hospital like my health condition adapted" and others reported "I'm better off than anon-child bearing lady". Likewise, regarding they could advise another with "Seek help from Allah, we will pass the crisis", "We are all like each other", "We are better off than many other women", "Don't be sad or you will bleed" and a some of them said "I can't make her calm down, I will cry with her" On the contrary, some of the studied women didn't adapt with placenta previa and still suffer from something. Regarding the problem that the pregnant woman still complain, some of them reported that "I'm worried about myself and my fetus ", "I'm worried about my fetus only", "I complain with lower abdominal pain" and minority of them "I'm worried about myself only". When we asked them about their suggestions to solve this problem, they reported that "I don't know" and others said "I get tired. I want to bear now, I can't afford", "No one can solve this problem except Allah" and others reported that "I get medication until labor".

Table 1. Number and distribution of the socio-demographic characteristics of studied women (153)

	n	%
Age (years)		
< 25	36	23.5
25 – 30	43	28.1
31 – 35	49	32.0
> 36	25	16.3
Mean ± SD	30.9 ±3.3	
Residence		
Rural	105	68.6
Urban	48	31.4
Women educational level		
Illiterate	8	5.2
Basic	14	9.2
Secondary	90	58.8
College graduated	41	26.8
Occupation		
House wife	130	85.0
Employed	23	15.0
Income		
Enough	97	63.4
Not enough	56	36.6
Husband's education		
Illiterate	10	6.5
Basic	9	5.9
Secondary	98	64.1
College graduated	36	23.5
Husband's occupation		
Employed	30	19.6
Free work	123	80.4
Husband smoking		
No	92	60.1
Yes	61	39.9

Table 2. Number and distribution of the reproductive history of studied women (153)

	n	%
Gestational age of current pregnancy		
< 33	23	15.0
33 – 37	85	55.6
> 37	45	29.4
Mean ± SD	34.2 ±1.8	
Gravidity		
Primi-gravida	13	8.5
Multi-gravida	140	91.5
Parity		
Nulli-para	18	11.8
Primi-para	29	19.0
Multi-para	106	69.3
History of abortion		
None	100	65.4
Yes	53	34.6
Causes of abortion (n=53)		
Congenital	15	28.3
Infection	3	5.7
Hormonal	10	18.9
immune system	6	11.3
Uterine abnormalities	5	9.4
Unknown	14	26.4
Mode of previous delivery (n=135)		
Cesarean section	98	72.6
Normal Vaginal delivery	37	27.4
Interval before current pregnancy (years) (n=133)		
< 1	14	10.5
1 – 3	35	26.3
4 – 5	38	28.6
>5	46	34.6

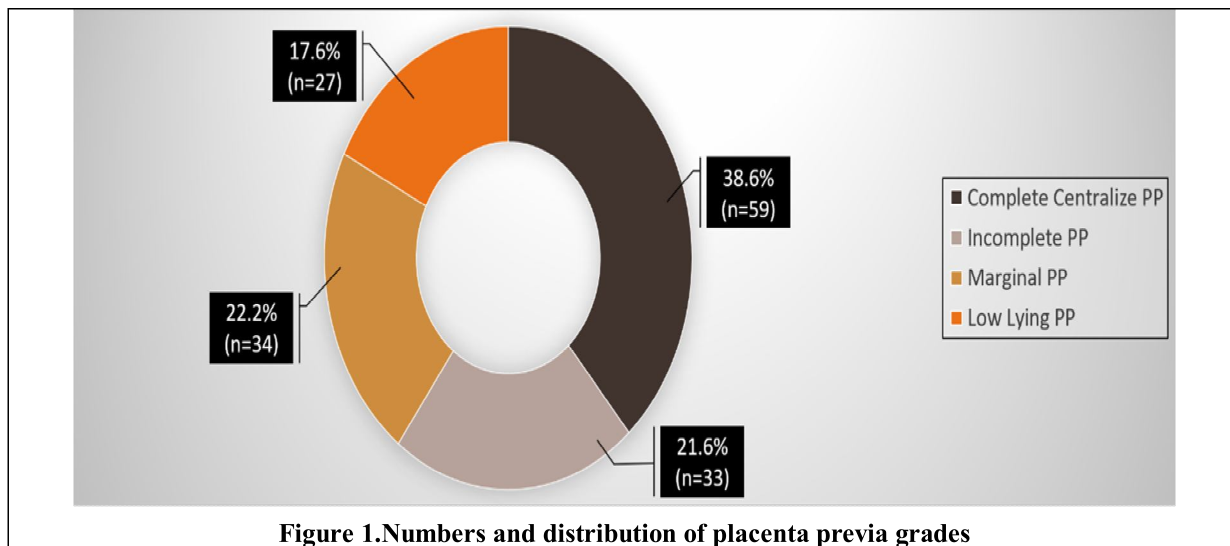

Figure 1.Numbers and distribution of placenta previa grades

Table 3. Number and distribution of women's experience about placenta previa (153)

	n	%
The first time that the obstetrician notifying the pregnant woman she has placenta previa		
After complain of vaginal bleeding leading to urgent visit	51	33.3
During regular antenatal visits without vaginal bleeding	102	66.7
The first reaction of pregnant woman after notifying her she has placenta previa		
Sadness	56	38.6
Worry	54	37.3
Careless	18	12.4
Angry	17	11.8
The current supported person for pregnant woman after notifying her she has placenta previa for the first time		
Obstetrician	11	7.2
Maternity nurse	4	2.6
Husband	71	46.4
Mother	67	43.8
Maternity health care providers told the pregnant woman about her placental grade		
Yes	38	24.8
No	115	75.1
Current maternal complications of placenta previa		
Hemorrhage	42	27.6
Anemia	63	41.1
Placenta accreta	43	28.1
Current fetal complications of placenta previa		
Fetal growth restriction	5	3.3

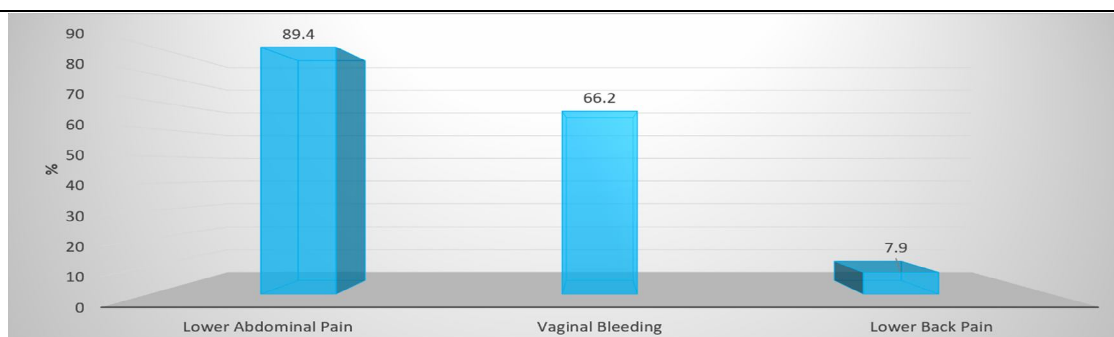

Figure 2. Women's experience about dangerous signs of placenta previa during pregnancy (n=151)

Table 4. Number and distribution of experience related hospitalization (153)

	n	%
The medical care provided for the pregnant woman since she hospitalized:		
o I.V fluid	93	60.8
o Iron supplementation	48	31.4
o Blood transfusion	68	44.4
o Monitoring blood pressure	115	75.2
o Antihemorrhagic drugs	53	34.6
The expected duration of hospitalization from the pregnant woman:		
o Until bleeding stop	14	9.2
o Until delivery	103	67.3
o Don't know	36	23.5
Satisfaction of the pregnant woman toward antenatal care receiving during:		
o Antenatal outpatient follow up	152	99.3
o In ward hospitalization	148	96.7

** Multiple choices were allowed*

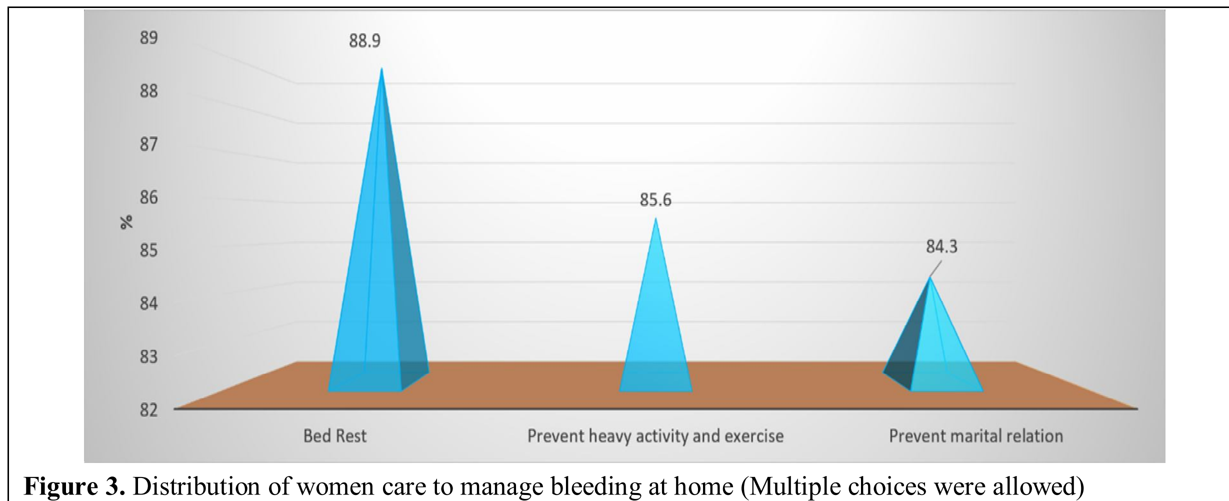

Figure 3. Distribution of women care to manage bleeding at home (Multiple choices were allowed)

Figure three clarified that the majority of the studied women (88.9%, 85.6%, and 84.3%, respectively) experienced managing bleeding in home with bed rest, prevention marital relation, and prevention heavy activity.

Table 5. Number and distribution of women's adaptation with placenta previa (153)

	n	%
Adaptation of the pregnant woman with placenta previa at the current time of pregnancy (n = 153)		
Yes	130	85.0
No	23	15.0
The way of adaptation from the studied women view (n = 130)		
Thank Allah, all of Allah's bids are good	58	44.6
Obstetricians calmed me down	23	17.7
I just jumped right to acceptance	23	17.7
When I saw many women in hospital like my health condition I adapted	17	13.1
I'm better off than non-child bearing lady	9	6.9
The problem that the pregnant woman still complain (n = 23)		
I'm worried about myself and my fetus	10	43.5
I'm worried about my fetus only	6	26.1
I complain with lower abdominal pain	4	17.4
I'm worried about myself only	3	13.0
Suggestions of the pregnant woman to solve the current problem (n = 23)		
I don't know	11	47.8
I get tired. I want to bear now, I can't afford.	6	26.1
No one can solve this problem except Allah	4	17.4
I get medication until labor	2	8.7
Pregnant woman's advice to other who has been told she has placenta previa for the first time from the pregnant women view (n = 153)		
Seek help from Allah, we will pass the crisis	92	60.1
We are all like each other	23	15.0
We are better off than many other women	19	12.4
Don't be sad or you will bleed	14	9.2
I can't make her calm down, I will cry with her	5	3.3

5. Discussion

The risk of severe postpartum hemorrhage in women with placenta previa is significantly increased, and severe postpartum hemorrhage remains the leading cause of maternal mortality worldwide **(Gibbins, Einerson, Varner, & Silver, 2018; Sotunsa et al., 2019)**. Satisfaction of the woman with care provided is an important parameter for adapting her for being with placenta previa **(Alhaqbani & Bawazir, 2022**).

Regarding reproductive history, the present study finding revealed that the majority of the studied women were multigravidas. Our results were in agreement with American study by **Shah, Saiyed, Deliwala & Dhameliya (2020)** aimed to determine the incidence, risk factors and perinatal outcome in women with placenta previa. They found nearly three quarters of women were multigravidas.

Concerning history of abortion, the present study finding showed that more than one third of the studied women reported history of abortion. This is in line with Indian study by **Sorakayalapeta & Manoli (2019)** aimed to evaluate the obstetrical characteristics and maternal and perinatal outcome of women of placenta previa. They reported nearly one fifth of the pregnant women had history of abortion.

Regarding mode of previous delivery, the current study finding displayed that nearly three quarters of the women had previous cesarean section. This is in agreement with a study by **Varlas (2021)** aimed to analyze the therapeutic management and counseling of the women with placenta accreta associated with placenta previa. He found that more than three quarters of the studied women had previous history of cesarean section.

Regarding the grades of placenta previa, the findings of the current study showed that two fifths of the studied women had complete centralize placenta previa. This is in agreement with a study by **Shah, Saiyed, Deliwala & Dhameliya (2020)**. They found three fifths of women had complete centralize placenta previa. The current study findings clarified that one quarter of the studied women had incomplete placenta previa. This is in agreement with **Khattak et al. (2019).** They also found one quarter of the pregnant women had incomplete placenta previa.

Regarding experience of bleeding among the studied women, the current study illustrated slightly one quarter complained with vaginal bleeding. This is in disagreement with British study by **Tokue, Tokue, Tsushima, & Kameda (2019)** aimed to evaluate the risk factors for massive bleeding based on angiographic findings among women with PP and PA. They reported that almost half of women had a massive bleeding.

Regarding women experience with current maternal complications of placenta previa, the current study findings revealed that more than two fifths of women complained with anemia. This is in agreement with **Nguyen & Vu (2021)**. They also found more than one third of the studied women experienced anemia. Also, in Sudanese study by **Alsammani & Nasralla (2021)** aimed to determine the fetal and maternal outcomes of major placenta previa. They reported that more than one quarter complained with anemia.

Regarding women experience of fetal growth restriction as current fetal complications of placenta previa, the finding of the current study showed minority of the studied women complained with fetal growth restriction. This result is in agreement with in Iranian study **Fateme, Saadati & Nazari (2021)** aimed to determine the frequency maternal and neonatal outcomes among women with placenta previa. They found the minority of the pregnant women had fetal growth restriction. While our study findings are in disagreement with previous studies by **Khattak et al. (2019).** They revealed that fetal growth restriction was not seen.

Regarding experience of pregnant woman with medical care provided during hospitalization, the current study showed that more than two fifths of women received blood transfusion. This is in congruent to this finding was the study in Portuguese study by **Bárbara, Costa, Braga & Braga (2021)** aimed to review the experience of a tertiary hospital with cases of placenta previa, with or without associated placenta accreta, evaluating their risk factors and outcomes. They revealed that two fifths of the women received blood transfusion.

Woman satisfaction is one of the main factors that aids in evaluating and elevating quality of health care services. Therefore, countries are considering the opinion of pregnant women as an essential component of ANC improvement programs. Satisfaction of the woman with care provided is an important parameter for adapting her for being with placenta previa **(Alhaqbani & Bawazir, 2022**).

Regarding satisfaction of the pregnant woman toward antenatal care receiving during outpatient follow up and in ward hospitalization, the majority of the studied women were satisfied

with healthcare receiving in outpatient and in ward. These findings are corroborated by the findings of Saudi study in **Alhaqbani & Bawazir (2022)** aimed to assess the pregnant women satisfaction with antenatal care services in primary health care. They clarified that more than three quarters satisfied with antenatal care receiving.

Furthermore, a lack of communication skills can hinder good interactions between pregnant women and maternity care providers. Communication barriers can have serious consequences. Some perinatal deaths could have been avoided with smooth communication skills in emergency situations **(Carpio-Arias et al., 2022).**

High-risk pregnant women manage their emotions mainly through deep emotion work. Social support and optimism contribute to their emotional coping. It is recommended that healthcare professionals working in high-risk pregnancy units, and especially nurses, employ interventions designed to provide professional support and legitimize the sharing of emotions **(Kozel, Barnoy & Itzhaki, 2022).**

6.Conclusion

There are many studies that care about placenta preiva as a medical condition, but this is the first Egyptian study care about experience of the women with placenta previa. The present study finding showed that the majority of women were adapted with placenta previa at the end of pregnancy more than at the time when they knew at first. This adaptation is a result of culture of the Egyptian woman that the end, she will be satisfied with whatever happens to her. Moreover, her knowledge regarding placenta previa increased by obstetrician.

7.Recommendations

Enhance communication between maternity care providers and women with placenta previa to facilitate the women adaptation and increase awareness of the women about placenta previa. **Further researcher:** Effect of educational programs on pregnant women`s experience regarding placenta previa.

8.Acknowledgement

We are thankful to the participant pregnant women.

9.Conflict of interest

The authors declare no conflict of interest.

10.References

- Ahmed, S. R., Aitallah, A., Abdelghafar, H. M., & Alsammani, M. A. (2015). Major placenta previa: rate, maternal and neonatal outcomes experience at a tertiary maternity hospital, sohag, Egypt: a prospective study. Journal of clinical and diagnostic research: JCDR, 9(11), QC17.
- Alhaqbani, S. M., & Bawazir, A. A. (2022). Assessment of Pregnant Women's Satisfaction with Antenatal Care Services in Primary Health Care in Cluster One in Riyadh, Saudi Arabia. Healthcare 2022, 10, 151.
- Alsammani Jr, M. A., & Nasralla, K. (2021). Fetal and Maternal Outcomes in Women with Major Placenta Previa among Sudanese Women: A Prospective Cross-Sectional Study. Cureus, 13(4).
- Bárbara, A., Costa, P., Braga, A., & Braga, J. (2021). VP44. 18: Placenta previa with/without accretism: six-year experience in a tertiary hospital. Ultrasound in Obstetrics & Gynecology, 58, 281-282.
- Basavaradder, V. S., Singh, C. M., & Singh, N. I. (2019). Study of Placental Location and Pregnancy Outcome with Previous Caesarean Delivery. Annals of International Medical and Dental Research, 5(6), 1.
- Carpio-Arias, T. V., Verdezoto, N., Guijarro-Garvi, M., Abril-Ulloa, V., Mackintosh, N., Eslambolchilar, P., & Ruíz-Cantero, M. T. (2022). Healthcare professionals' experiences and perceptions regarding health care of indigenous pregnant women in Ecuador. BMC Pregnancy and Childbirth, 22(1), 1-11.
- Correa-de-Araujo, R., & Yoon, S. S. (2021). Clinical outcomes in high-risk pregnancies due to advanced maternal age. Journal of Women's Health, 30(2), 160-167.
- Das, R., Farzana, F. D., Sultana, Z., Mukherji, K., Baayo, A., Sultana, M., ... & Faruque, A. S. G. (2022). Evaluation of SIMESON, a training program to improve access to quality health care for pregnant women and newborn in different healthcare facilities of northern Bangladesh. Nursing open, 9(1), 801-815.

- Fateme, C., Saadati, N. N., & Nazari, Z. (2021). VP44. 21: Maternal and neonatal outcomes of placenta previa at a tertiary maternity hospital in Ahvaz, Islamic Republic of Iran. Ultrasound in Obstetrics & Gynecology, 58, 282-283.
- Furugen, A. (2020). Transfer Mechanisms of Compounds between Mother and Fetus/Infant Aimed for Optimized Medication during Pregnancy and Breastfeeding. Yakugaku Zasshi, 140(10), 1199-1206. doi: 10.1248/yakushi.20-00140
- Fyala, E., Mashaly, S., Nezar, M., & Ashraf Ghanem, M. D. (2018). Maternal and Perinatal Outcome of Major Degree Placenta Previa at Mansoura University Hospitals. The Medical Journal of Cairo University, 86(December), 4259-4265.
- Gibbins, K. J., Einerson, B. D., Varner, M. W., & Silver, R. M. (2018). Placenta previa and maternal hemorrhagic morbidity. The Journal of Maternal-Fetal & Neonatal Medicine, 31(4), 494-499.
- Hintze, A. (2019). Open-Endedness for the Sake of Open-Endedness. Artificial Life, 25(2), 198-206. doi: 10.1162/artl_a_00289
- Jauniaux, E., Moffett, A., & Burton, G. J. (2020). Placental implantation disorders. Obstetrics and Gynecology Clinics, 47(1), 117-132.
- Khattak, S. N., Akram, U., Pervaiz, E., Anayat, M., Munir, T. A., Akhter, N., & Jan, A. A. (2019). Incidence and Risk Factors of Maternal and Fetal Outcomes among Patients of Placenta Previa with and without Placenta Accreta. Journal of Bahria University Medical and Dental College, 9(1), 57-61.
- Kozel, E., Barnoy, S., & Itzhaki, M. (2022). Emotion management of women at risk for premature birth: The association with optimism and social support. Applied Nursing Research, 64, 151568.
- Nguyen, T. T. H., & Vu, D. (2021). Characteristics of women with cesarean section due to placenta previa at national hospital of obstetrics and gynecology in 2020. Tạp chí Khoa học Điều dưỡng, 4(1), 76-85.
- Nieto Calvache, A. J., Palacios Jaraquemada, J. M., Osanan, G., Cortes Charry, R., Aryananda, R. A., Bangal, V. B. & Mereci, W. (2021). Lack of experience is a main cause of maternal death in placenta accreta spectrum patients. Acta Obstetricia et Gynecologica Scandinavica, 100(8), 1445-1453.
- Owen, M. D., Cassidy, A. L., & Weeks, A. D. (2021). Why are women still dying from obstetric hemorrhage? A narrative review of perspectives from high and low resource settings. International journal of obstetric anesthesia, 102982.
- Sarojini, M. K., & Bhanu, A. B. (2016). Radhika. Clinical study of placenta previa and its effect on maternal health and fetal outcome. Int J Reprod Contracept Obstet Gynecol, 5, 3496-9.
- Shah, P. T., Saiyed, F. Z., Deliwala, K. J., & Dhameliya, P. (2020). Study of fetomaternal outcome in cases of placenta previa at tertiary care hospital. International Journal of Reproduction, Contraception, Obstetrics and Gynecology, 9(8), 3326-3330.
- Sorakayalapeta, M. R., & Manoli, N. S. (2019). Maternal and perinatal outcome in placenta previa: an observational study at a tertiary care hospital in Mysore, Karnataka, India. International Journal of Reproduction, Contraception, Obstetrics and Gynecology, 8(4), 1322-1327.
- Tokue, H., Tokue, A., Tsushima, Y., & Kameda, T. (2019). Risk factors for massive bleeding based on angiographic findings in patients with placenta previa and accreta who underwent balloon occlusion of the internal iliac artery during cesarean section. The British journal of radiology, 92(1102), 20190127.
- Topalidou, A., Thomson, G., & Downe, S. (2020). Covid-19 and maternal and infant health: are we getting the balance right? A rapid scoping review. The Practising Midwife, 23(7), 36-45.

- Varlas, V. N., Bors, R. G., Birsanu, S., Maxim, B., Clotea, E., & Mihailov, M. (2021). Maternal and fetal outcome in placenta accreta spectrum (PAS) associated with placenta previa: a retrospective analysis from a tertiary center. Journal of Medicine and Life, 14(3), 367.
- Vignato, J., Beck, C. T., Conley, V., Inman, M., Patsais, M., & Segre, L. S. (2021). The lived experience of pain and depression symptoms during pregnancy. MCN: The American Journal of Maternal/Child Nursing, 46(4), 198-204.
- Zakherah, M. S., Abdel-Aziz, M., Othman, E. R., & Abbas, A. M. (2018). Maternal and neonatal outcomes of placenta previa and accreta at Assiut women's health hospital, Egypt. International Journal of Reproduction, *Contraception, Obstetrics and Gynecology, 7(8),3024-3029.*