Emerging Patterns and Determinants of Recurrent Pregnancy Loss among Newly Married Women in Urban Areas of South-South Nigeria

Gbaranor K. B.[1]*, Oreh Adaeze C.[2], John E. E.[3], Ekeng O. B.[4], Opara C. J.[5], Mube A. W.[6], Barinua-Gbaranor N. P.[7], Etuk M. S.[3], Okoiseh O. S.[8], Monday S. N.[9], Timi-Oladipo A.[9], Fache M. M.[10], Rabi F.[11], Orukwowu U.[12], Onyema C.[12], Nmerukini C.[13], Nonju I. I.[1], Sito O. K.[14], Peterside S. S.[15], Ohaka J. C.[16]

[1]Department of Human Physiology, College of Medical Sciences, Rivers State University, Port Harcourt, Rivers State, Nigeria
[2]Ministry of Health, Rivers State, South-South, Nigeria
[3]Akwa Ibom State Ministry of Health, Uyo, Akwa Ibom State, Nigeria
[4]Department of Anaesthesia, Nile University, Abuja, Nigeria
[5]Department of Community Medicine, PAMO University of Medical Sciences, Port Harcourt, Rivers State, Nigeria
[6]Department of Obstetrics and Gynaecology, University of Port Harcourt Teaching Hospital, Port Harcourt, Rivers State, Nigeria
[7]Department of Office and Information Management, Faculty of Administration and Management, Rivers State University, Rivers State, South-South, Nigeria
[8]Department of Obstetrics and Gynaecology, University of Uyo Teaching Hospital, Uyo, Akwa Ibom State, Nigeria
[9]Cardinal Care Hospital and Maternity, Abuja, Nigeria
[10]Procare Hospital, life Camp, Abuja
[11]Department of Radiology, Nile University, Abuja, Nigeria
[12]Department of Nursing Sciences, College of Medical Sciences, Rivers State University, Port Harcourt, Rivers State, Nigeria
[13]Department of Internal Medicine, College of Medical Sciences, Rivers State University, Port Harcourt, Rivers State, Nigeria
[14]Department of Family Medicine, University of Port Harcourt Teaching Hospital, Port Harcourt, Rivers State, Nigeria
[15]Department of Community Medicine, Rivers State University, Port Harcourt, Rivers State, Nigeria
[16]Department of Community Medicine, College of Medical Sciences, Rivers State University, Port Harcourt, Rivers State, Nigeria

Abstract: Miscarriages among newly married women is on the increase and this scenario has made these women to pass through psychological trauma. Miscarriage occur spontaneously and naturally thus leading to loss of pregnancy. Most of these women experienced these miscarriages right from their first intake (pregnancy) and some after their first child. These miscarriages are influenced by various biological, medical, psychological, social and cultural factors. This study is aim to evaluate the Emerging Patterns and Determinants of Recurrent Pregnancy Loss Among Newly Married Women in Urban Areas of South-South Nigeria. This was a cross-sectional study involving 250 women. A well-structured questionnaire was administered to participants. The study lasted for a period of 2 months. Statistical analysis was done using SPSS version 25.0 and p < 0.05 was significant. The results revealed that most of the participants were between 23-37 years of age and 60% had tertiary level of education, 44% were business women, 40% have married for a period between 2-4 years, 92% has been pregnant, 88% has been having miscarriages, 56% at 3 months gestation, 20% had a child, 76% had previous abortion and 80% are facing psychological trauma.

Keywords: Emerging, Patterns, Determinants, Recurrent Pregnancy Loss, Urban.

INTRODUCTION

Spontaneous pregnancy loss is a common medical condition in reproductive-age women [1]. According to a worldwide estimation, 23 million cases occur annually (Quenby, *et al*., 2021; Turesheva, *et al*., 2023).

Miscarriage is a spontaneous loss of early pregnancy, which often occurs in the first 20 weeks of pregnancy and occupies about 15–20% of maternal pregnancy com plications (Quenby, *et al*., 2021; Bardos, *et al*., 2015; Wang, *et al*., 2025). The aetiology and pathogenesis of miscarriage are unclear. Approximately 50% of miscarriages are caused by chromosomal abnormalities (Griebel, *et al*., 2005). Patients with complete spontaneous abortions rarely require intervention. Women with incomplete miscarriages require medical or surgical interventions. Early abortion

Peer Review Process: The Journal "Middle East Research Journal of Medical Sciences" abides by a double-blind peer review process such that the journal does not disclose the identity of the reviewer(s) to the author(s) and does not disclose the identity of the author(s) to the reviewer(s).

390

with a combination of mifepristone and misoprostol has replaced some surgical abortions, as it has no long-term adverse effects on health or fertility (Biggs, *et al*., 2017; Stubblefield, *et al*., 2004).

Psychological impact of the event is far more serious than the clinical presentation and subsequent physical harm (Quenby, *et al*., 2021; La, *et al.,* 2021; Turesheva, *et al*., 2023). Moreover, many societies, due to their cultural and traditional beliefs, determine women's status based on their ability to conceive and give birth (Aimagambetova, *et al.,* 2020; Bapayev, *et al*., 2021; Issanov, *et al*., 2022; Turesheva, *et al*., 2023).

Abortion and miscarriage have the same outcome— pregnancy loss, both of them are involved the separation of an embryo or a fetus from the mother's uterus before it is mature (DeVilbiss, *et al*., 2020). Abortion is defined as elective or medically indicated termination of pregnancy at any gestational age (Sedgh, *et al*., 2007; Wang, *et al*., 2025). The term abortion is commonly used to indicate an induced abortion, meaning a medication or procedure to end the pregnancy, while the term miscarriage is used to indicate a spontaneous abortion. According to Bearak's f indings, six out of ten unintended pregnancies end in induced abortion (Bearak, *et al*., 2020; Wang, *et al*., 2025).

MATERIALS AND METHOD
This was a cross-sectional study involving 250 married women who were within the age of 18 to 47 years. A well-structured questionnaire was administered to participants. Each participant had one questionnaire to fill appropriately and independently after instructions were given to them by the Research Assistants. Data collection took place over two months, from1st February to March 31st, 2025.

RESULTS
The results revealed that The results revealed that most of the participants were between 23-37 years of age and 60% had tertiary level of education, 44% were business women (Table 1), 40% have married for a period between 2-4 years (Table 2), 92% has been pregnant (Table 3), 88% has been having miscarriages(Table 4), 56% at 3 months gestation(Table 5), 20% had a child, and 76% had previous abortion(Table 6).

Table 1: Occupational Distribution of Respondents

Education	Frequency	Percentage (%)
Farming	20	8.00
Business	110	44.00
Civil servant	80	32.00
Student	40	16.00
Total	**250**	**100.00**

Table 2: Duration of marriage

Response	Frequency	Percentage (%)
6 months – 1 year	100	28.00
2-4 years	70	40.00
5-7 years	50	20.00
8-20 years	20	8.00
12-14 years	10	4.00
Total	**250**	**100.0**

Table 3: Respondents who have gotten pregnancy

Response	Frequency	Percentage (%)
Respondents who have not gotten pregnancy	240	92.00
Respondents who have gotten pregnancy	10	8.00
Total	**250**	**100.0**

Table 4: Respondents who have experienced miscarriage

Response	Frequency	Percentage (%)
Respondents who have experienced miscarriage	230	88.00
Respondents who have not experienced miscarriage	20	12.00
Total	**250**	**100.0**

Table 5: Gestational of miscarriage

Response	Frequency	Percentage (%)
1 month	10	4.00
2 months	70	28.00

Response	Frequency	Percentage (%)
3 months	140	56.00
4 months	30	12.00
Total	**250**	**100.0**

Table 6: Respondents who have done previous abortion before marriage

Response	Frequency	Percentage (%)
Respondents who have done previous abortion before marriage	190	76.00
Respondents who have not done previous abortion before marriage	60	24.00
Total	**250**	**100.0**

DISCUSSION

Miscarriages among newly married women is on the increase and this scenario has made these women to pass through psychological trauma. Miscarriage occur spontaneously and naturally thus leading to loss of pregnancy. Most of these women experienced these miscarriages right from their first intake (pregnancy) and some after given birth to their first child. These miscarriages are influenced by various biological, physical, medical, psychological, emotional, social and cultural factors. Miscarriage, also known as spontaneous abortion, refers to the natural loss of a pregnancy before the age of viability.

The study revealed that the respondents were between 18 to 47 years of age with most (30%) between 33 to 37 years of age. This maternal age is important in-terms of conception and this maternal age is a well-established risk factor for miscarriage, particularly as women age beyond their early 30s. Both pathogenesis (the biological mechanisms of disease development) and pathology (the structural and functional changes in tissues/organs) contribute to this increased risk. Educational levels of the respondents shows that majority (60%) had tertiary level of education and this might have caused their delayed in early marriage. The respondents might decide to complete their education because engaging in marital affairs in order not cause academic distraction.

Also, the study revealed that 44% of the respondents are business class and this may contribute to the incessant miscarriages they experienced due to stress. Occupation-related miscarriage refers to pregnancy loss due to harmful exposures, physical demands, or stressors encountered in the workplace. While not all occupational factors directly cause miscarriage, certain environments, tasks, and exposures increases the risk through identifiable pathophysiological mechanisms. Occupation-related miscarriage is multifactorial and involves toxic, physical, psychological, and biological stressors that disrupt normal pregnancy physiology, implantation, fetal development, or placental function. Again, prolonged standing or night shifts may leads to vascular congestion in the pelvis, disrupts circadian rhythms thus, affecting hormonal balance and increased cortisol (stress hormone), which may impact placental development. High-stress jobs (emergency services, caregiving, catering services etc) increase cortisol and catecholamines and these interfere with implantation, placental development and fetal growth. Night shifts disrupt melatonin production, affecting reproductive hormone regulation.

Most of the respondents have married for a period between 2 to 4 years and this means that they are been experiencing spontaneous abortion (miscarriage). However, 92% has been pregnant, and 88% has been having miscarriages. This shows that miscarriages is on the increase among married women. These means that most of miscarriages may be influenced by various biological, physical, medical, psychological, emotional, social and cultural factors. The study revealed that majority of the respondents have their miscarriage between 2 to 3 months of gestation. Miscarriages are most common in the first trimester of pregnancy, particularly between 6 to 12 weeks of gestation. This is because organogenesis happens during this period, and the embryo is most vulnerable to genetic abnormalities also early miscarriages are due to chromosomal abnormalities or failures in implantation.

Furthermore, majority (76%) of the respondents had previous abortion before they got married and history of previous abortion (either spontaneous miscarriage or induced abortion) may predispose women to future pregnancy loss through several biological and structural mechanisms. However, not every woman with history of previous abortion will have subsequent miscarriage but increases with multiple abortions, unsafe procedures, or infection. Proper medical care, including cervical assessment and infection treatment, can reduce these risk factors. The psychological impact of previous abortions may also lead to increased stress and anxiety in subsequent pregnancies. Elevated stress hormones (like cortisol) may negatively affect uterine blood flow and fetal development, contributing indirectly to miscarriage. The study shows that 20% of the respondents had their first child birth before experiencing miscarriage and this may be due to chromosomal abnormalities, uterine abnormalities, cervical insufficiency, infections, hormonal or endocrine disorders, immunological factors, lifestyle factors, advanced maternal age, and previous obstetric complications. Also, 80% have not gotten any child due to spontaneous miscarriage and this may also due to several risk factors.

CONCLUSION

Miscarriages among newly married women is on the increase and this scenario has made these women to pass through psychological trauma. Miscarriage occur spontaneously and naturally thus leading to loss of pregnancy. The rising trend of miscarriages in recent years has garnered significant attention. While the overall global rate of miscarriage remains relatively stable, certain factors have contributed to an apparent increase in specific populations and time periods. The results revealed that most of the respondents were between 23-37 years of age and 60% had tertiary level of education, 44% were business women, 40% have married for a period between 2-4 years, 92% has been pregnant, 88% has been having miscarriages, 56% at 3 months gestation, 20% had a child, and 76% had previous abortion.

REFERENCES

- Aimagambetova, G.; Issanov, A.; Terzic, S.; Bapayeva, G.; Ukybassova, T.; Baikoshkarova, S.; Aldiyarova, A.; Shauyen, F.; Terzic, M (2020). The effect of psychological distress on IVF outcomes: Reality or speculations? PLoS ONE, 15, e0242024. [CrossRef]
- Akbayan Turesheva, Gulzhanat Aimagambetova, Talshyn Ukybassova, Aizada Marat, Perizat Kanabekova, Lyazzat Kaldygulova, Ainur Amanzholkyzy, Svetlana Ryzhkova, Anastassiya Nogay, Zaituna Khamidullina, Aktoty Ilmaliyeva, Wassim Y. Almawi, KuralayAtageldiyeva, (2023). Recurrent Pregnancy Loss Etiology, Risk Factors, Diagnosis, and Management. Fresh Look into a Full Box-Review. Journal of Clinical Medicine.
- Bapayeva, G.; Aimagambetova, G.; Issanov, A.; Terzic, S.; Ukybassova, T.; Aldiyarova, A.; Utepova, G.; Daribay, Z.; Bekbossinova, G.; Balykov, A (2021). The Effect of Stress, Anxiety and Depression on In Vitro Fertilization Outcome in Kazakhstani Public Clinical Setting: A Cross-Sectional Study. J. Clin. Med., 10, 937. [CrossRef]
- Bardos J, Hercz D, Friedenthal J, Missmer SA, Williams Z (2015). A national survey on public perceptions of miscarriage. Obstet Gynecol. 125(6):1313–20.
- Bearak J, Popinchalk A, Ganatra B, Moller AB, Tunçalp Ö, Beavin C (2020). Unintended pregnancy and abortion by income, region, and the legal status of abortion: estimates from a comprehensive model for 1990–2019. Lancet Glob Health. 8(9):e1152–61.
- Biggs MA, Upadhyay UD, McCulloch CE, Foster DG (2017). Women's mental health and Well-being 5 years after receiving or being denied an abortion: a pro spective, longitudinal cohort study. JAMA Psychiatry. 74(2):169–78.
- DeVilbiss EA, Mumford SL, Sjaarda LA, Connell MT, Plowden TC, Andriessen VC (2020). Prediction of pregnancy loss by early first trimester ultrasound characteristics. Am J Obstet Gynecol. 223(2):e242241–242222
- Griebel CP, Halvorsen J, Golemon TB, Day AA (2005). Management of spontaneous abortion. Am Fam Physician. 72(7):1243–50.
- Issanov, A.; Aimagambetova, G.; Terzic, S.; Bapayeva, G.; Ukybassova, T.; Baikoshkarova, S.; Utepova, G.; Daribay, Z.; Bekbossi nova, G.; Balykov, A (2022). Impact of governmental support to the IVF clinical pregnancy rates: Differences between public and private clinical settings in Kazakhstan—A prospective cohort study. BMJ Open, e049388. [CrossRef]
- La,X.; Wang, W.; Zhang, M.; Liang, L (2021). Definition and Multiple Factors of Recurrent Spontaneous Abortion. Adv. Exp. Med. Biol. 1300, 231–257. [CrossRef]
- Quenby S, Gallos ID, Dhillon-Smith RK, Podesek M, Stephenson MD, Fisher J (2021). Miscarriage matters: the epidemiological, physical, psychological, and economic costs of early pregnancy loss. Lancet. 397(10285):1658–67.
- Quenby, S.; Gallos, I.D.; Dhillon-Smith, R.K.; Podesek, M.; Stephenson, M.D.; Fisher, J.; Brosens, J.J.; Brewin, J.; Ramhorst, R.; Lucas, E.S (2021). Miscarriage matters: The epidemiological, physical, psychological, and economic costs of early pregnancy loss. Lancet, 397, 1658–1667. [CrossRef] [PubMed]
- Sedgh G, Henshaw SK, Singh S, Bankole A, Drescher J (2007). Legal abortion worldwide: incidence and recent trends. Perspect Sex Reprod Health. 39(4):216–25.
- Stubblefield PG, Carr-Ellis S, Borgatta L (2004). Methods for induced abortion. Obstet Gynecol. 104(1):174–85.
- Yadi Wang, Yujie Tang, Guoshuai Wang, Ran Wei, Lu Liu, Chao Lu (2025). Epidemiological trends in abortion and miscarriage between 1990 and 2019. Wang *et al.,* Reproductive Health.