

Full length Research Article

Trends of Twin Births in Kogi State, North-Central Nigeria

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Summary: Globally, Nigeria has the highest rate of twin births. However, within the country, there are variations in twinning rates. Report on the twinning rate in Kogi state, north-central Nigeria, is scarce. A 30-year retrospective study of the occurrence of twin births between 1991 and 2020 in Kogi state, north-central Nigeria was conducted. Data were obtained from six hospitals in the state: Federal Medical Centre Lokoja, General Hospital Mopa-Muro, Zonal Hospital Kabba, Specialist Hospital Obangede, General Hospital Okene, and Prince Abubakar Audu University Teaching Hospital Anyigba. The data were analysed monthly, quarterly, and yearly for twinning frequency using descriptive statistics and one-way ANOVA. There were 1783 twin deliveries during the study period, accounting for 2.60% of all deliveries. The annual occurrence of twinning ranged from 20.9‰ at the Federal Medical Centre Lokoja to 28.5‰ at the Zonal Hospital Okene resulting in 25.1‰ as the mean frequency of twin births for the study period in Kogi state. There is no significant difference ($p > 0.05$) between the variations in the twinning rate. The fluctuation in the frequency of twinning in Kogi state could be due to increased use of oral contraceptives, urbanisation, socioeconomic factors, and a decrease in family size and reproductive age.

Keywords: Twin birth, Kogi state, Frequency of twinning, Twins in Nigeria.

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INTRODUCTION

Twin birth, a pregnancy event that leads to the delivery of two babies or foetuses can either result in live birth or stillbirth (Lu *et al.*, 2013). While twins are revered and celebrated in certain communities, they are considered unusual in others (Smits and Monden, 2011). Twin births occur in two forms: identical (monozygotic; MZ) and fraternal (dizygotic; DZ). The constancy in the rate of occurrence of MZ twins (approximately 3-5 twins per 1000) has confirmed its spontaneity and randomisation (Nwankwo *et al.*, 2013). Variation in DZ twinning is greatly affected by numerous factors which include genetics, family history, geographical location, maternal age, maternal weight and height, lifestyle, diet, socio-economic status, family size, and Assisted Reproductive Technology (ART) (Obiechina *et al.*, 2011; Nilsen *et al.*, 2016; Akinseye *et al.*, 2019).

The continual use of oral contraception has been found to lead to a high incidence of twinning due to high rebound gonadotropin secretion (Oyaromade *et al.*, 2021). In developed nations, ART has been a major cause of the increase in the frequency of twinning in recent years (Monden *et al.*, 2021). Twin birth rate is lowest among young mothers (19 - 24 years) and increases with an increase in maternal age (25 - 34 years) which then drops sharply because of a decline in the pool of growing follicle-stimulating hormone (FSH) concentration (Sunday-Adeoye *et al.*, 2008; Akinseye *et al.*, 2019). Geographical variation

has significantly influenced the twinning rate globally with some countries having very high rates of twin births and others having extremely low rates. Though, Africa is reported to be the highest twin producer in the early period of the 21st century (Sunday-Adeoye *et al.*, 2008), the rate of twinning has rapidly increased in Asia which has a nearly equal frequency of twinning rate with Africa (Monden *et al.*, 2021).

In Nigeria, the highest occurrence of multiple births including twins, triplets, and quadruplets is predominantly found in Igbo-Ora, a rural town in Oyo State in the Southwestern part of the country (Akinseye *et al.*, 2019). The high rate of twin births in this community which celebrates multiple births annually is traced to a set of diets believed to contain phyto-hormones that trigger the production of FSH (Akinboro *et al.*, 2008; Olotu *et al.*, 2023). The incidence and frequency of twinning from different parts of the six geopolitical zones of Nigeria have been reported (Akinboro *et al.*, 2008; Bakare *et al.*, 2011; Adewale *et al.*, 2018; Gabriel *et al.*, 2020; Wekere *et al.*, 2021; Igbodike *et al.*, 2024). To date, there has been no report on the occurrence and frequency of twin births in Kogi State, one of the six north-central states in Nigeria where there are very few reports. This study was undertaken to determine the incidence and frequency of twin births in Kogi state, Nigeria. We believe that the data obtained will assist policymakers in the demographic analysis of the state.

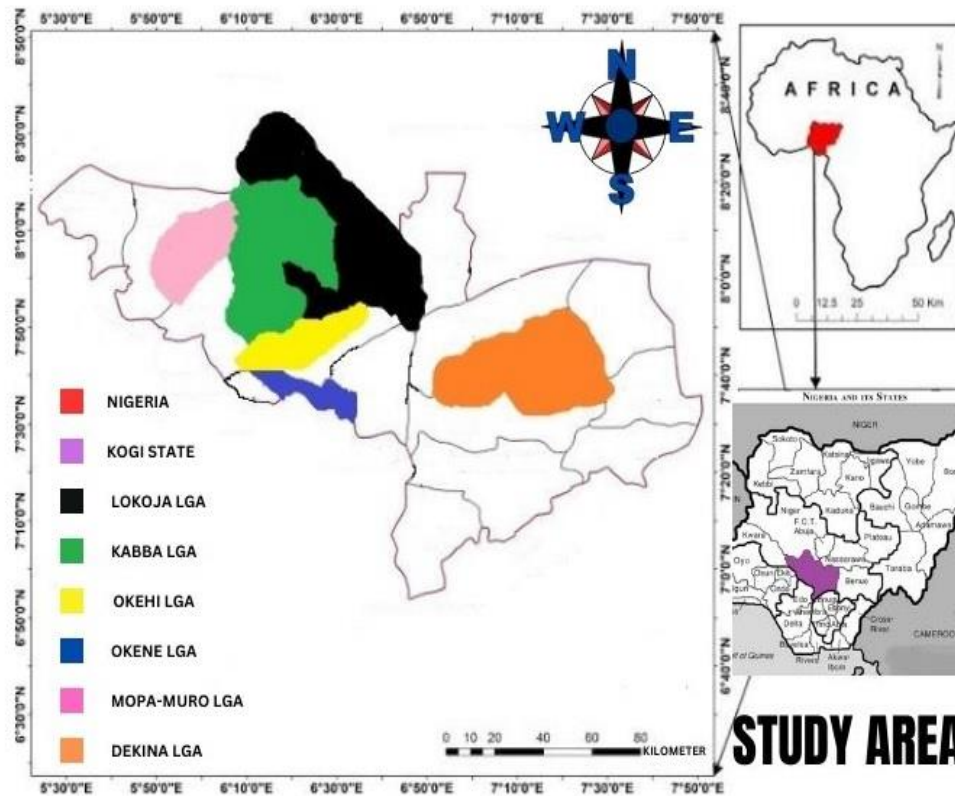


Figure 1:
Kogi State, Nigeria showing the Local Government areas of the Hospitals used for data collection

MATERIALS AND METHODS

Study Location: Six Hospitals in Kogi State, north-central Nigeria (Fig. 1): a Federal Government Hospital, and five State Government Hospitals including the State University Teaching Hospital were used for the data collection. These Hospitals serve as primary, secondary, and tertiary health centers, and respectively are, Federal Medical Centre Lokoja (established on the 9th of November 1999), Zonal Hospital Kabba (established on the 1st of January 1989), Zonal Hospital Okene (established on the 1st of January 1960), General Hospital Mopa-Muro (established on the 1st of January 1999), Specialist Hospital Obangede (established on the 10th of January 1982), and Prince Abubakar Audu University Teaching Hospital Anyigba (established on the 29th of February 2011). The cluster sampling method was used to divide Kogi State into the senatorial districts (Kogi East, Kogi Central, and Kogi West) after which the hospitals were selected in each of the three districts using a purposive sampling technique. The selected government hospitals are the major hospitals with more patronage by pregnant women compared to the private hospitals most of which are not more than 10 years in operation. Kogi state (Fig. 1) located at a latitude of 7° 45' 0N and longitude of 6° 45' 0E was created on the 27th of August, 1991. It is one of the six north-central states (Benue, Kogi, Kwara, Nasarawa, Niger, and Plateau) and ranks as the 13th largest state in Nigeria. The state shares boundaries with nine other states (Niger, and Nasarawa to the North; Ondo, Ekiti, and Kwara to the West; Enugu, Anambra, and Edo to the South; and Benue to the East) and the Federal Capital Territory. The total land mass of the State is 29,833km and the population projection in 2016 was 4,473,500 (National Bureau of Statistics,

Nigeria; official Gazette (FGP 71/52007/2500(OL24)). There are three major ethnic groups (Okun, Ebira, and Igala) and several minor ethnic groups including the Ogori, Bassa-Nge, Bassa-Kwomu, Koton, Nupe, Oworo, and Gwari in Kogi State.

Methodology: Data on childbirth records between 1991 and 2020 were extracted from the maternity sections and the central records departments of the various hospitals. Due to inadequate record keeping, and industrial strike action by workers, records for some months and years are missing from the data on each hospital. The approval for data collection was obtained from the Chief Medical Director of the Hospital Management Board at Lokoja in Kogi State (the body that oversees the state government-owned hospitals in the State), and from the Medical Director of the Federal Medical Centre at Lokoja. This study was executed according to the ethical guidelines of World Medical Association (2022) Helsinki Declaration, and the individual consent for this retrospective analysis was waived.

Statistical analysis: The Microsoft Office Excel® 2023 was used for data analysis. The trend and incidence of twinning were analysed using descriptive statistics to determine monthly, quarterly, and annual rates and frequencies. The number of single births, twin births, and total births were denoted by "x", "y", and "z" respectively. The number of single births for every twin delivery (x/y) was determined. In every 1000 deliveries, the number of twin births was calculated as

$$\frac{\text{Twin deliveries (y)}}{\text{Total deliveries (z)}} \times 1000$$

RESULTS

Tables 1 - 6 present the annual occurrence of twin births at the Federal Medical Centre Lokoja, Zonal Hospital Kabba, Zonal Hospital Okene, General Hospital Mopa-Muro, Specialist Hospital Obangede, and Prince Abubakar Audu University Teaching Hospital Anyigba in Kogi state respectively. There was no regular pattern of seasonal change in twin births from the records of the six hospitals. At the Federal Medical Centre Lokoja (Kogi West Senatorial District), there were 45.2‰ births and 1.9‰ births as the highest and lowest twin births in 2002 and 2009 respectively (Table 1). There was no record of twin birth in 2000. There were 20.9 twin births on average per 1000 total deliveries, and 40.4 single births for every twin delivery. Figure 2 shows the time plot of the occurrence of twinning for the 240-month study period. Thirteen peaks were observed during the period occurring in January, March, April, May, June, July, August, September, October, and December with frequencies of 1, 2, 2, 1, 1, 1, 1, 2, 1 and 1 respectively. The peaks occurred randomly in the months of the year but were mostly seen in March, April, and September.

From the records obtained from 1993 to 2020 at Zonal Hospital Kabba, Kogi West Senatorial District (Table 2), the highest and lowest twin birth rates of 57.9‰ and 10.0‰ were obtained in 1996 and 1993 respectively. During the study period, there were 28.0 twin births per 1000 deliveries and 34.8 single births for every twin delivery on average. The time plot of the occurrence of twinning for the period (300 months) is presented in Figure 3. Thirteen peaks were observed in January, February, March, April, May, June, July, August, September, and November with frequencies of

1, 4, 1, 3, 1, 3, 1, 1, 2, and 1 respectively. The peaks occurred randomly but were mostly seen in February, April, and September.

Table 1:

Annual incidence of twin births at the Federal Medical Centre, Lokoja between 2000 and 2019

Year	Single del. (x)	Twin del. (y)	Total del. (z)	Single for each twin delivery (x/y)	Twin births per 1000 delivery
2000	566	0	566	-	-
2001	819	25	844	32.8	29.6
2002	1394	66	1460	21.1	45.2
2003	1575	63	1638	25.0	38.5
2004	1908	62	1970	30.8	31.5
2005	1901	46	1947	41.3	23.6
2006	1674	73	1747	22.9	41.8
2007	2225	64	2289	34.8	28.0
2008	2264	68	2332	33.3	29.2
2009	1572	3	1575	524.0	1.9
2010	1371	8	1379	171.4	5.8
2011	2254	6	2260	375.7	2.7
2012	2015	30	2045	67.2	14.7
2013	2385	71	2456	33.6	28.9
2014	1475	56	1531	26.3	36.6
2015	1352	36	1388	37.6	25.9
2016	1178	29	1207	40.6	24.0
2017	382	18	400	21.2	45.0
2018	207	8	215	25.9	37.2
2019	1495	11	1506	135.9	7.3
Total	30012	743	30755	40.4	20.9

Key: del. = delivery(ies)

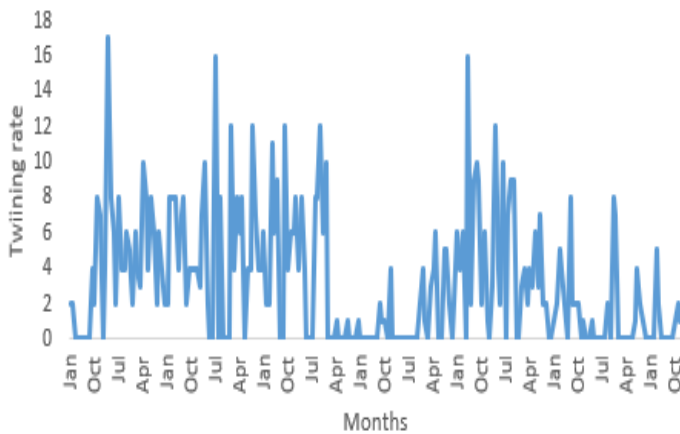


Figure 2: Time plot of the incidence of twinning recorded at the Federal Medical Centre, Lokoja for 20 years (2000 - 2019).

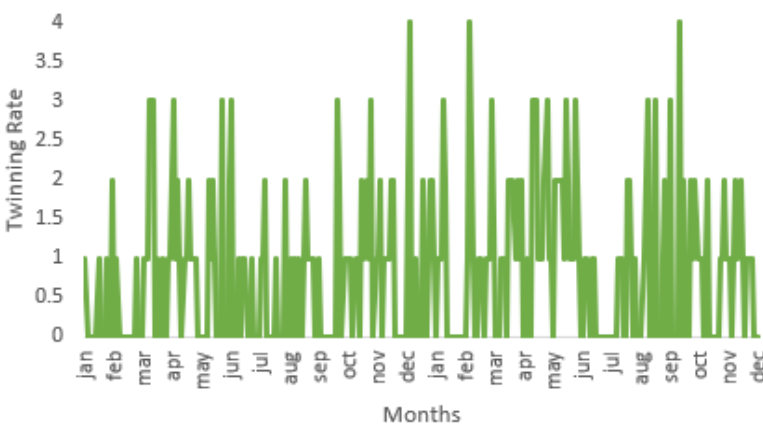


Figure 3: Time plot of the incidence of twinning recorded at the Zonal Hospital Kabba for 25 years (1993 - 2020, there was no record for 2007-2009).

Table 2.

Annual incidence of twin births at the Zonal Hospital, Kabba between 1993 and 2020

Years	Single del. (x)	Twin del. (y)	Total del (z)	Single for each twin del. (x/y)	Twin birth per 1000 delivery
1993	296	3	299	98.7	10.0
1994	263	4	267	65.8	15.0
1995	262	11	273	23.8	40.3
1996	228	14	242	16.3	57.9
1997	212	7	219	30.3	32.0
1998	185	11	196	16.8	56.1
1999	125	5	130	25.0	38.5
2000	222	6	228	37.0	26.3
2001	196	7	203	28.0	34.5
2002	241	9	250	26.8	36.0
2003	277	15	292	18.5	51.4
2004	347	7	354	49.6	19.8
2005	436	13	449	33.5	29.0
2006	256	7	263	36.6	26.6
2010	512	10	522	51.2	19.2
2011	530	13	543	40.8	23.9
2012	726	15	741	48.4	20.2
2013	699	20	719	35.0	27.8
2014	584	10	594	58.4	16.8
2015	154	2	156	77.0	12.8
2016	309	11	320	28.1	34.4
2017	290	8	298	36.3	26.8
2018	329	14	343	23.5	40.8
2019	364	8	372	45.5	21.5
2020	302	10	312	30.2	32.1
Total	8345	240	8585	34.8	28.0

Key: del. = delivery(ies)

At the Zonal Hospital in Okene (Kogi Central Senatorial District), records from 1991 to 2020 (Table 3) show that the highest and lowest twin birth rates of 51.4‰ and 12.7‰ were obtained in 1992 and 1996 respectively. There were 28.5 twin births per 1000 deliveries and 34.1 single births for every twin delivery during the study period. The time plot for the study period (264 months) shows that eight peaks were observed in March, May, August, September, November, and December with frequencies of 1, 1, 1, 3, 1, and 1, respectively (Figure 4). The peaks occurred randomly but were mostly in September.

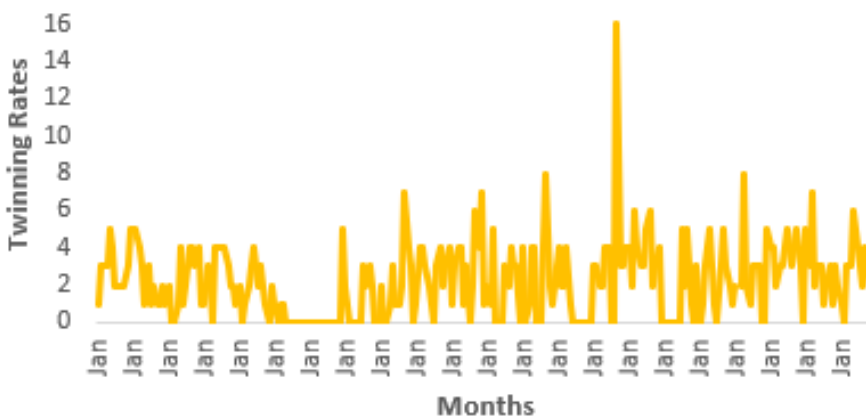


Figure 4:

Time plot of the incidence of twinning at the Zonal Hospital, Okene for 22 years (1991 - 2020).

Table 3:

Annual incidence of twin births at the Zonal Hospital Okene between 1991 and 2020

Years	Single del. (x)	Twin del (y)	Total del (z)	Single for each twin delivery (x/y)	Twin birth per 1000 delivery
1991	933	35	968	26.7	36.2
1992	535	29	564	18.4	51.4
1993	613	26	639	23.6	40.7
1994	1044	30	1074	34.8	27.9
1995	763	22	785	34.7	28.0
1996	234	3	237	78.0	12.7
1998	235	5	240	47.0	20.8
1999	552	12	564	46.0	21.3
2000	783	24	807	32.6	29.7
2001	958	31	989	30.9	31.3
2002	1335	36	1371	37.1	26.3
2003	1119	23	1142	48.7	20.1
2004	1036	30	1066	34.5	28.1
2005	390	13	403	30.0	32.3
2013	1658	44	1702	37.7	25.9
2014	1579	42	1621	37.6	25.9
2015	626	16	642	39.1	24.9
2016	971	27	998	36.0	27.1
2017	890	29	919	30.7	31.6
2018	1191	40	1231	29.8	32.5
2019	1387	35	1422	39.6	24.6
2020	1285	38	1323	33.8	28.7
Total	20117	590	20707	34.1	28.5

Key: del. = delivery(ies)

From 1999 to 2020, the twin birth record at the General Hospital, Mopa-Muro (Kogi West Senatorial District, Table 4) shows that the highest and lowest twin birth rates of 49.4‰ and 7.9‰ were obtained in 2005 and 2016 respectively. The mean of twin births per 1000 deliveries for the period was 24.9 births, and the mean of single births for each twin delivery was 36.3. There was no record of twin births in 1999, 2002, 2015, and 2020. The time plot of the incidence of twin birth for the 264-month study period (Figure 5) showed seven peaks observed in January, May, June, September, and October with frequencies of 2, 1, 2, 1, and 1, respectively. The peaks occurred mostly in January. Similarly, at the Specialist Hospital, Obangede (Kogi Central Senatorial District) from 2003 to 2020, the birth records (Table 5) show that the highest and lowest twin birth rates of 44.4‰ and 10.2‰ were in 2013 and 2006 respectively.

Table 4:

Annual incidence of twin births at the General Hospital, Mopa-Muro Kogi State between 1999 and 2020

Years	Single del. (x)	Twin del. (y)	Total del. (z)	Single for each twin delivery (x/y)	Twin birth per 1000 delivery
1999	55	0	55	-	-
2000	67	1	68	67.0	14.7
2001	96	1	97	96.0	10.3
2002	84	0	84	-	-
2003	94	2	96	47.0	20.8
2004	130	3	133	43.3	22.6
2005	126	1	127	126.0	7.9
2006	130	3	133	43.3	22.6
2007	143	3	146	47.7	20.5
2008	152	6	158	25.3	38.0
2009	112	3	115	37.3	26.1
2010	140	2	142	70.0	14.1
2011	127	4	131	31.8	30.5
2012	141	4	145	35.3	27.6
2013	118	2	120	59.0	16.7
2014	128	4	132	32.0	30.3
2015	49	0	49	-	-
2016	77	4	81	19.3	49.4
2017	51	2	53	25.5	37.7
2018	63	1	64	63.0	15.6
2019	76	1	77	76.0	13.0
2020	69	0	69	-	-
Total	2228	47	2275	36.3	24.9

Key: del. = delivery(ies)

Table 5:

Annual incidence of twin birth at the Specialist Hospital Obangede, Okehi Local Government area of Kogi State between 2003 and 2020

Years	Single del. (x)	Twin del. (y)	Total del. (z)	Single for each twin delivery (x/Y)	Twin birth per 1000 delivery
2003	89	0	89	-	-
2005	124	3	127	41.3	23.6
2006	195	2	197	97.5	10.2
2007	55	2	57	27.5	35.1
2008	111	4	115	27.8	34.8
2009	106	4	110	26.5	36.4
2010	142	5	147	28.4	34.0
2011	78	0	78	-	-
2012	167	3	170	55.7	17.6
2013	237	11	248	21.5	44.4
2014	265	8	273	33.1	29.3
2015	75	2	77	37.5	26.0
2016	132	5	137	26.4	36.5
2017	115	2	117	57.5	17.1
2018	172	4	176	43.0	22.7
2019	212	9	221	23.6	40.7
2020	191	3	194	63.7	15.5
Total	2466	67	2533	36.8	26.5

Key: del. = delivery(ies)



Figure 5: Time plot of the incidence of twinning at the General Hospital, Mopa-Muro for 22 years (1999 - 2020).

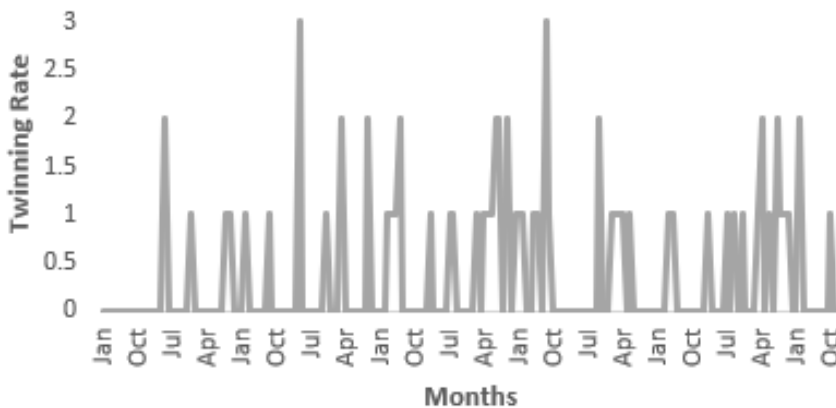


Figure 6: Time plot of the incidence of twinning at the Specialist Hospital Obangede for 17 years (2003 - 2020).



Figure 7: Time plot of the incidence of twinning at the Prince Abubakar Audu University Teaching Hospital Anyigba for 16 years (2005 - 2020).

The mean of twin births per 1000 deliveries was 26.5 births, and the mean of single births for each twin delivery was 36.8. The Time plot of the incidence of twinning for the 204 months study period shows twelve peaks in February, March, April, May, June, July, August, October, and November with frequencies of 1, 1, 2, 1, 1, 1, 2, 2 and 1, respectively (Figure 6). The peaks occurred in March and August.

At the Prince Abubakar Audu University Teaching Hospital, Anyigba (Kogi East Senatorial District, Table 6) the highest and lowest twin birth rates of 65.8‰ and 12.3‰ were obtained in 2006 and 2020 respectively. The mean of twin births per 1000 deliveries pooled for the period was 21.7 births, and the mean of single births for each twin delivery was 38.6. A time plot of the occurrence of twinning for the 192 months of the study period is presented in Figure 7. Nine peaks were observed in May, June September, October, November, and December with frequencies 3, 2, 1, 2, and 1 respectively. The peaks occurred in November. Cumulatively, there were 68,654 deliveries in the six hospitals during the study period. The mean of twin births per 1000 deliveries was 25.1 births, and the mean of single births for each twin delivery was 37.5 (Table 7).

Table 6: Annual frequency of twin births at the Prince Abubakar Audu University Teaching Hospital between 2005 and 2020

Years	Single del (x)	Twin del (y)	Total del (z)	Single for each twin delivery (x/y)	Twin birth per 1000 delivery
2005	65	0	65		0.0
2006	142	10	152	14.2	65.8
2007	153	2	155	76.5	12.9
2008	149	3	152	49.7	19.7
2009	183	4	187	45.8	21.4
2010	264	8	272	33.0	29.4
2011	190	6	196	31.7	30.6
2012	359	17	376	21.1	45.2
2013	442	9	451	49.1	20.0
2014	358	6	364	59.7	16.5
2015	234	7	241	33.4	29.0
2016	228	3	231	76.0	13.0
2017	108	2	110	54.0	18.2
2018	194	8	202	24.3	39.6
2019	317	7	324	45.3	21.6
2020	321	4	325	80.3	12.3
Total	3707	96	3803	38.6	21.7

Table 7: Frequency of twin births in Kogi State, north-central Nigeria from 1991 to 2020

Years	Single del. (x)	Twin del. (y)	Total del. (z)	Single for each twin delivery (x/y)	Twin birth per 1000 delivery
FMCL	30012	743	30755	40.4	20.9
ZHK	8345	240	8585	34.8	28.0
ZHO	20117	590	20707	34.1	28.5
GHMM	2228	47	2271	47.4	24.9
SHO	2466	67	2533	36.8	26.5
PAAUTHA	3707	96	3803	38.6	21.7
Total	66875	1783	68654	37.5	25.1

FMCL - Federal Medical Centre Lokoja, ZHK - Zonal Hospital Kabba, ZHO - Zonal Hospital Okene, GHMM - General Hospital Mopa-Muro, SHO - Specialist Hospital Obangede, PAAUTH - Prince Abubakar Audu University Teaching Hospital Anyigba

DISCUSSION

This is a 30-year retrospective evaluation of the prevalence of twin births in Kogi State, north-central Nigeria. Five of the six hospitals including a University teaching hospital are owned by the state government, while the sixth is owned by the federal government. Throughout the period analysed herein, there was no specific pattern in twin birth incidence per 1000 deliveries. The overall mean occurrence of twin births for the study period in Kogi state is 25.1‰, and it ranged from 20.9‰ at the Federal Medical Centre, Lokoja to 28.5‰ at the Zonal Hospital, Okene. This frequency falls within the range of values obtained in Nigeria. It is higher than the reported value of 23.2‰ in Kano, 22‰ in Zamfara, 17.3‰ in Katsina, and 8.5‰ in Sokoto northern Nigeria (Attah *et al.*, 2014; Onankpa and Nauzo, 2014; Lawal *et al.*, 2019; Oyaromade *et al.*, 2021), and Ile-Ife in southern Nigeria (Igbodike *et al.*, 2024), but lower than the reported value of 35.1‰ (Fakeye, 1986) and 37.4‰ (Iyiola *et al.*, 2013) in Kwara State, 32.5‰ in Abuja (Akaba *et al.*, 2013); 39.7‰ among Hausa women (Rehan and Tafida, 1980), 35.9‰ in Ibadan (Bakare *et al.*, 2011), 28‰ in Jos (Aisien *et al.* 2000), 68.1‰ in Oyo, 46.5‰ in Osun, 29.5‰ Delta,

and 30.0% in Ekiti (Akinboro *et al.*, 2008; Igberase *et al.*, 2008; Iyiola *et al.*, 2013; Akinseye *et al.*, 2019).

The value obtained herein appears to lie between values from the other parts of Nigeria. Kogi state which is centrally located in Nigeria shares boundaries with 10 states from the north, east, west, and southern parts of the country, and is easily accessible to migrants from these zones and encourages inter-tribal marriage. Migration and inter-ethnic mixing are factors known to modify twinning rates (Knox and Morley, 1960). The type of food consumed may also be an important factor in the incidence of twinning in Kogi state. Olotu *et al.* (2023) investigated some food products including yam, cassava, okra leaf, beans, grains, maca root, pineapple, dairy products, fruit, and vegetables. It revealed the presence of bioactive ingredients like FSH and luteinizing hormones, phytoestrogen, gonadotropin, insulin-like protein, enzyme bromelain, zinc, and folic acid which are believed to induce multiple pregnancies. These are major farm produce that serve as the main diets consumed by the people of Kogi state who are also mostly farmers.

The high incidence of twinning in Okene (28.5%) may be due to genetics, family size, and maternal weight. In this town, siblings from the same parent are seen to be carriers of multiple pregnancies. As a developing town, there is limited access to information on family planning; hence, an average family comprises 4 to 6 children. The huge family size accounts for the large population size in the zone. The fertility level of the reproductive age of both men and women is also high. This can be attributed to a low level of exposure to environmental toxins in a town with no or little industrial activities. Kabba and Mopa-Muro are located in the western part of Kogi state and the indigenous dwellers are believed to have originated from the southwestern part of Nigeria (the region with the highest twin birth rate) as they share some cultural beliefs including language, dressing, marriage patterns, and food. The value obtained for Kabba (28.0%) is relatively close to 30.0% obtained in Ekiti a neighboring southwestern state (Akinboro *et al.* 2008), while that of Mopa-Muro (24.9%) is lower. This discrepancy can be accounted for by the population size, choice, and preference of health centers. Kabba is more developed than Mopa-Muro and the hospital serves as the major health centre for the zone. Moreover, the presence of qualified personnel, the number of services rendered, and the availability of necessary health equipment attract health seekers. The values from the records at the specialist Hospital in Obangede (26.5%) are also relatively lower than those from Okene which is within the same zone. The variation can be attributed to the population size and urbanisation.

The incidence of twin births at the Federal Medical Centre, Lokoja is the lowest. The hospital is located in Lokoja, Kogi state capital with an estimated 2024 population of 885,882 (United Nations World Urbanization Prospects, 2018). The low value from this location could be attributed to urbanisation, socioeconomic factors, lifestyle, low family size, environment, and diet (Gan *et al.*, 2007). There is an interplay between these factors, as urban dwellers are more exposed to processed foods and junk due to their busy lifestyles and have little or no access to naturally prepared food. Exposure to toxins from industrial and commercial

activities is also common in the city. A limitation of this study is the number of birth records accessible for analysis. In Nigeria, 37.3% of births occur in hospitals (Sule and Madugu, 2004). It is a common trend in the study area to use local methods for child deliveries and these are not recorded in hospitals or birth registries.

In conclusion, in this study, we have presented data for the first time on the occurrence of twin births from different parts of Kogi state, north-central Nigeria using records of births from six different hospitals located in the different zones of Kogi state. Data analysis shows a high rate of twin births in Kogi state and is consistent with values from other parts of Nigeria. The central location of the state in Nigeria probably influenced the data, it has paved the way for migration and a wide range of inter-tribal relationships between the indigenes and people from other parts of the country. The twinning rate can also be attributed to urbanisation, geographical location, genetics, family size, coital rate, and ART.

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