ISSN: 2457-0400

Impact Factor: 6.711

WORLD JOURNAL OF ADVANCE HEALTHCARE RESEARCH

www.wjahr.com

Volume: 9, Issue: 12

Page N. 147-154

Year: 2025

Original Article

Coden USA: WJAMA3

PATTERNS AND FACTORS INFLUENCING BIRTH SPACING AMONG WOMEN IN BAGHDAD

***[1]Enass Basim Mohammed Ali, [2]Noora Asaad Mohammed Zwayen, [3]Zena Ismaeel Kadhem, [4]Sura Layth Mohammed**

[1]Baghdad- Al-Karkh Health Directorate, Baghdad, Iraq.
[2]Baghdad- Al-Karkh Health Directorate, Baghdad, Iraq.
[3]Babylon Health Directorate, Babylon, Iraq.
[4]Al-Anbar health Directorate, Al-Anbar, Iraq.

Article Received: 08 November 2025 **Article Revised:** 28 November 2025 **Article Published:** 01 December 2025

***Corresponding Author: Enass Basim Mohammed Ali**

Baghdad- Al-Karkh Health Directorate, Baghdad, Iraq.

DOI: https://doi.org/10.5281/zenodo.17800814

How to cite this Article: *1Enass Basim Mohammed Ali, 2Noora Asaad Mohammed Zwayen, 3Zena Ismaeel Kadhem, 4Sura Layth Mohammed (2025). Patterns And Factors Influencing Birth Spacing Among Women In Baghdad. World Journal of Advance Healthcare Research, 9(12), 147–154.

ABSTRACT

Background: Adequate child spacing is a key determinant of maternal and child health, influenced by multiple demographic, social, and reproductive factors. Understanding the pattern and determinants of interpregnancy intervals can guide strategies to improve reproductive health outcomes. **Objectives:** This study aimed to determine the pattern of interpregnancy intervals and to assess the influence of selected demographic and fertility-related factors among a sample of women in Baghdad. **Subjects and Methods:** A cross-sectional study was conducted in four major teaching hospitals in Baghdad—Al-Kadhimiya, Al-Yarmouk, Baghdad, and Al-Elwia—between January 2 and April 30, 2012. A total of 500 women admitted for delivery were interviewed using a structured questionnaire covering sociodemographic, reproductive, and contraceptive characteristics. Statistical analysis was performed using SPSS version 20, with $p < 0.05$ considered significant. **Results:** The mean interpregnancy interval was 27.3 months, and the most common spacing duration was 2–4 years (45.2%). Significant predictors of longer interpregnancy intervals included maternal age at current pregnancy, age at delivery of the index child, breastfeeding duration, method of delivery, and birth order ($p < 0.05$). However, education, occupation, sex, and survival status of the index child showed no significant association. Despite 82.8% of women reporting contraceptive use after the previous delivery, this had no significant impact on spacing. Oral contraceptive pills were the preferred method for 42% of participants, while most women favored 20–24 years as the ideal age for marriage and childbearing, and three children as the preferred family size. **Conclusion:** Promoting awareness about optimal birth spacing and integrating family planning education can support healthier maternal and child outcomes in Iraq.

KEYWORDS: Understanding the pattern and determinants of interpregnancy intervals can guide strategies to improve reproductive health outcomes.

INTRODUCTION

Population dynamics remain a major public health concern worldwide, particularly in developing countries where rapid population growth has placed immense pressure on social and health systems. The rate of population change is influenced by various reproductive behaviors, among which birth spacing plays a pivotal role.[1] Birth spacing, defined as the interval between two consecutive live births, is not only a demographic measure but also a crucial determinant of maternal and child health outcomes.[2] Short inter-birth intervals are known to increase the risks of maternal depletion, low birth weight, preterm births, and infant mortality, while longer intervals have been shown to enhance the survival and wellbeing of both mothers and children.[3,4] Globally, epidemiologists, demographers, and reproductive health

experts have emphasized the significance of understanding the differentials and determinants of birth intervals to design effective interventions that promote healthier reproductive patterns.[1] Evidence indicates that appropriate spacing between births—typically ranging from 2½ to 3 years, or up to 3–5 years in some recommendations—allows sufficient time for maternal recovery, restoration of nutrient stores, and better care for existing children.[2,5] The World Health Organization (WHO) recommends a minimum of 33 months between two live births to minimize risks of adverse maternal, neonatal, and infant outcomes.[4] Despite global advocacy, birth spacing practices in many developing countries remain suboptimal due to sociocultural, economic, and educational constraints.[6] In low-resource settings, short birth intervals often stem from limited access to family planning services, early marriage, and societal pressures favoring large families or male offspring.[7] Conversely, expanding educational opportunities and women's participation in the workforce have been shown to lengthen birth intervals through improved reproductive awareness and contraceptive use.[8] Studies in the Middle East and North Africa, including Iraq, Saudi Arabia, Jordan, and Egypt, reveal considerable variability in median birth intervals, ranging from 28 to over 60 months, influenced by socioeconomic status, breastfeeding practices, and cultural norms.[5,9] The impact of optimal birth spacing extends beyond survival statistics. It contributes to healthier pregnancies, improved fetal growth, and better cognitive and developmental outcomes for children.[10] For mothers, longer intervals reduce the risk of anemia, preeclampsia, and maternal mortality, while enhancing psychological wellbeing and family stability.[11] In Iraq, previous research indicates that a large proportion of women have birth intervals shorter than the recommended 36 months, underscoring the need for targeted educational and contraceptive programs.[5] Hence, investigating the pattern and determinants of birth intervals among women in Baghdad is essential to guide local reproductive health strategies and align them with WHO recommendations. Such understanding can inform policymakers to promote optimal birth spacing, improve maternal and child health outcomes, and contribute to sustainable population growth management in Iraq.

METHOD

This cross-sectional study was conducted in four major teaching hospitals in Baghdad—Al-Kadhimiya, Al-Yarmouk, Baghdad, and Al-Elwia—each of which has well-established maternity wards serving large catchment populations. Data collection was carried out between January 2 and April 30, 2012. Each hospital was visited two to three times per week, from 8:00 a.m. to 12:00 p.m., to recruit eligible participants and collect information through direct interviews. A total of **500 women** who attended the selected hospitals for delivery during the study period were enrolled. Inclusion criteria comprised women who had at least one previous live birth or stillbirth. Exclusion criteria included primigravidae, women with three or more abortions, those with a history of secondary infertility or ovulation induction prior to the current pregnancy, and women who had been married more than once. Informed consent was obtained from all participants after a full explanation of the study purpose and confidentiality assurance. Data were collected using a structured questionnaire developed after reviewing relevant literature and validated through a pilot study involving 10 women from Al-Yarmouk Teaching Hospital. The questionnaire covered sociodemographic variables (age, education, occupation, residence, family type), reproductive history (age at marriage, parity, birth order, outcome of index child, breastfeeding duration, contraceptive use), and husband's characteristics (age, occupation, education, residence). Additional questions assessed women's opinions regarding ideal age of marriage, desired family size, and preferred birth spacing interval. The **birth interval** was defined as the duration between the previous (index) birth and the most recent delivery. For analytical purposes, intervals were categorized as: <2 years, 2–4 years, and >4 years. **Data analysis** was performed using **SPSS version 20**. Descriptive statistics were expressed as frequencies and percentages. Associations between categorical variables and birth interval were examined using the Chi-square test, with a p-value <0.05 considered statistically significant. The pilot study ensured questionnaire clarity and time efficiency, and minor modifications were incorporated accordingly.

RESULTS

The study included 500 women aged 17–49 years (mean = 28.57 ± 5.20 years). The most common interpregnancy interval was 2–4 years in 226 women (45.2%), followed by <2 years in 205 women (41.0%), and >4 years in 69 women (13.8%). The mean interpregnancy interval was 27.3 months, and the median was 24 months. A significant association was observed between women's age at current pregnancy and age at birth of the index child with the interpregnancy interval ($p = 0.0001$ and $p = 0.044$, respectively). However, age at marriage did not show a significant relationship ($p = 0.365$). Regarding educational status, 51.2% of participants had secondary or higher education, but education level showed no significant association with interpregnancy interval ($p = 0.458$). Among educated women, 51.2% had intervals < 2 years, and 44.9% had intervals > 4 years, similar to patterns among less-educated women. In terms of occupation, 377 women (75.4%) were not employed, while 123 (24.6%) were government employees. Among both groups, about 41% reported short intervals (<2 years), and the relationship between employment status and interpregnancy interval was not statistically significant ($p = 0.301$). In summary, the findings indicate that age-related factors significantly influenced birth spacing, whereas education and employment did not show notable effects on interpregnancy intervals. As in table 1, 2 and fig 1.

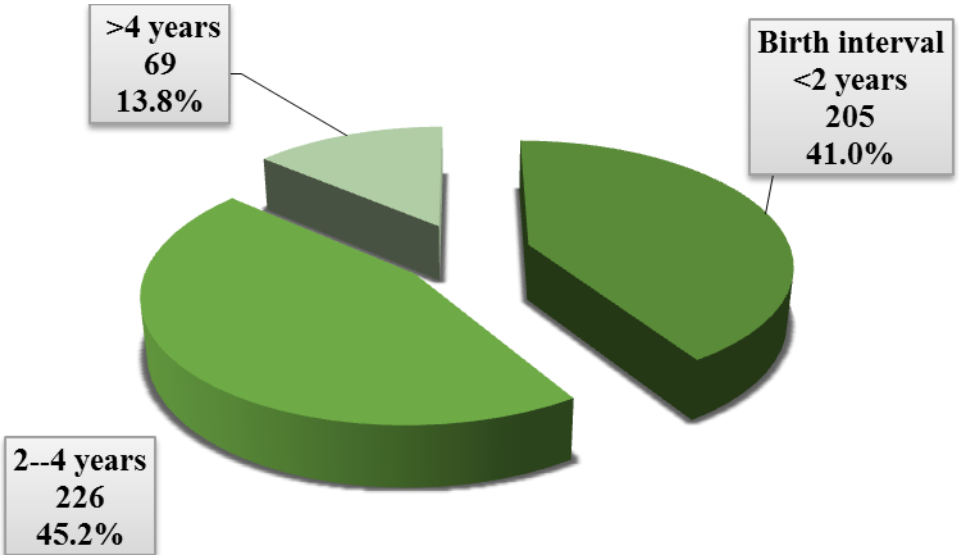

Figure 1: The distribution of the study group according to inter pregnancy interval.

Table 1: The distribution of women according to inter pregnancy intervals in relation to age at current pregnancy, age at marriage, age at birth of index child.

Age (years)		Total (n=500)		Inter pregnancy interval						χ^2;d.f.;P value
				<2Y (n=205)		2-4 (n=226)		>4Y (n=69)		
		No	%	No	%	No	%	No	%	
Current pregnancy	<20	9	1.8	3	33.3	6	66.7	-	-	33.3;8; 0.0001*
	20---24	96	19.2	46	47.9	39	40.6	11	11.5	
	25---29	197	39.4	82	41.6	93	47.2	22	11.2	
	30---34	127	25.4	56	44.1	56	44.1	15	11.8	
	35---39	59	11.8	17	28.8	28	47.5	14	23.7	
	=>40	12	2.4	1	8.3	4	33.3	7	58.3	
At marriage	<15	45	9.0	11	24.4	24	53.3	10	22.2	8.736;8; 0.365
	15---19	175	35.0	74	42.3	78	44.6	23	13.1	
	20---24	186	37.2	78	41.9	85	45.7	23	12.4	
	25---29	86	17.2	40	46.5	34	39.5	12	14.0	
	=>30	8	1.6	2	25.0	5	62.5	1	12.5	
At birth of index child	<15-19	48	9.6	12	25	25	52.1	11	22.9	18.71;8; 0.044*
	20---24	169	33.8	66	39.1	76	45.0	27	16.0	
	25---29	181	36.2	88	48.6	76	42.0	17	9.4	
	30---34	84	16.8	33	16.1	39	46.4	12	14.3	
	=>35	18	3.6	6	2.9	10	55.6	2	11.1	

Age (years); 28.57±5.20 (17-49),
Age at marriage (years); 20.19±4.22 (12-30),
Age of woman at birth of index child; 25.36±4.85 (14-39)

Table 2: The distribution of study group according to education and occupation in relation to inter pregnancy intervals.

Age (years)		Total (n=500)		Inter pregnancy interval						χ^2;d.f.;P value
				<2Y (n=205)		2-4 (n=226)		>4Y (n=69)		
		No	%	No	%	No	%	No	%	
Education	Illiterate	27	5.4	9	33.3	16	59.3	2	7.4	7.757;8; 0.458
	Primary	144	28.8	58	40.3	64	44.4	22	15.3	
	Intermediate	73	14.6	33	45.2	26	35.6	14	19.2	
	Secondary	113	22.6	44	38.9	57	50.4	12	10.6	
	High education	143	28.6	61	42.7	63	44.1	19	13.3	
Occupation	Housewife*	377	75.4	154	40.8	166	44.0	57	15.1	2.404;2; 0.301
	Gover. employee	123	24.6	51	41.5	60	48.8	12	9.8	

*House wives (self-employee, work at home)

When women parity was considered, the result obtained shows that the parity had no statistical significant influence on the inter pregnancy interval duration (P=0.699) (Table3). Women opinion regarding optimum interval between pregnancies shows statistical significant association with inter pregnancy interval duration. As among 90.0% of women who were considered that the optimum birth interval between pregnancies is 2-4 years, 46.4% of these women were achieved that birth interval duration. While among women who were regarded optimum birth intervals between pregnancies is more than 4 years, only 18.5% of them were achieved this inter pregnancy interval duration (P=0.007) (Table 3). Table 4 demonstrated the relation of some characteristics of husband (age, education, and occupation) in relation to inter pregnancy interval duration, all these characteristics shows no impact on inter pregnancy interval duration (P=0.746, 0.405 & 0.180 respectively). The results in table 5 revealed that, 344(68.8%) women were lived in urban area, 45.0% of them reported an inter pregnancy interval of 2-4 years, the same finding was also observed among women from rural area (45.5%) (P=0.986). When the type of family considered, the results showed no statistical significant association (P=0.149) between type of family and the inter pregnancy interval duration, as 91(48.4%) of women from nuclear families and 135 (43.3%) women from extended families were practiced 2-4 years inter pregnancy interval duration (Table 5).

Table 3: The distribution of study group according to parity, optimum birth interval between pregnancies with inter pregnancy intervals.

		Total (n=500)		Inter pregnancy interval						χ^2;d.f.;P value
				<2Y (n=205)		2-4 (n=226)		>4Y (n=69)		
		No	%	No	%	No	%	No	%	
Parity	**1-3**	325	65	129	39.7	151	46.5	45	13.8	0.72;2; 0.699
	4& more	175	35	76	43.4	75	43	24	13.7	
Optimum intervals between pregnancies	**<2 years**	20	4.0	8	40.0	4	20.0	8	40.0	14.13;4; 0.007*
	2-4 years	453	90.6	187	41.3	210	46.4	56	12.4	
	>4 years	**27**	**5.4**	**10**	**37.0**	**12**	**44.4**	**5**	**18.5**	

Table 4: The distribution of some characteristics of father in relation to inter pregnancy intervals.

		Total (n=500)		Inter pregnancy interval						χ^2;d.f.;P value
				<2Y (n=205)		2-4 (n=226)		>4Y (n=69)		
		No	%	No	%	No	%	No	%	
Age (years)	**<20**	106	21.2	44	41.5	45	42.5	17	16.0	6.78;10; 0.746
	20---24	159	31.8	68	42.8	77	48.4	14	8.8	
	25---29	155	31.0	61	39.4	67	43.2	27	17.4	
	30---34	59	11.8	25	42.4	26	44.1	8	13.6	
	35---39	11	2.2	4	36.4	5	45.5	2	18.2	
	=>40	10	2.0	3	30.0	6	60.0	1	10.0	
Education	**Illiterate**	51	10.2	19	37.3	25	49.0	7	13.7	8.292;8; 0.405
	Primary	134	26.8	57	42.5	62	46.3	15	11.2	
	Intermediate	94	18.8	44	46.8	37	39.4	13	13.8	
	Secondary	94	18.8	37	39.4	48	51.1	9	9.6	
	High education	127	25.4	48	37.8	54	42.5	25	19.7	
Occupation	**Not working**	4	0.8	3	75.0	1	25.0	-	-	6.264;4; 0.180
	Self-employed	337	67.4	144	42.7	153	45.4	40	11.9	
	Gove employee	**159**	**31.8**	**58**	**36.5**	**72**	**45.3**	**29**	**18.2**	

Table 5: The distribution of study group according to place of residence and family type with inter pregnancy intervals.

		Total (n=500)		Inter pregnancy interval						χ^2;d.f.;P value
				<2Y (n=205)		2-4 (n=226)		>4Y (n=69)		
		No	%	No	%	No	%	No	%	
Place of residency	**Rural**	156	31.2	64	41	71	45.5	21	13.5	0.029;2; 0.986
	Urban	344	68.8	141	41.0	155	45	48	14.0	
Family type	**Nuclear**	188	37.6	67	35.6	91	48.4	30	16.0	3.813;2; 0.149
	Extended	**312**	**62.4**	**138**	**44.2**	**135**	**43.3**	**39**	**12.5**	

The study found a significant association between birth order and interpregnancy interval (p = 0.039). Among women whose index child was the first, 37.7% had intervals <2 years, 42.5% had 2–4 years, and 19.8% had >4 years. In contrast, among women with five or more previous births, only 6.6% had intervals <2 years, while 33.3% had >4 years, indicating that higher birth order was associated with longer spacing. Regarding characteristics of the index child, most were live births (97.2%), while 2.8% were stillbirths. Although half of the mothers with stillbirths conceived again within <2 years, compared to 40.8% of those with live births, this difference was not statistically significant (p = 0.690). The type of pregnancy (single or twin) also showed no significant association with interval length (p = 0.535); 92.2% of women had single pregnancies, and both groups most commonly had intervals of 2–4 years. Similarly, the sex of the index child had no significant effect (p = 0.389); about 42% of mothers of boys and 48% of mothers of girls** spaced births by 2–4 years**. However, a significant association was observed between the method of delivery and interpregnancy interval. Among cesarean deliveries (16.8%), 33.3% had intervals <2 years, whereas among normal vaginal deliveries, 42.5% had intervals <2 years, suggesting that women who underwent cesarean delivery tended to allow slightly longer spacing before subsequent conception. As in table 6,7.

Table 6: The birth order of the index child in relation to inter pregnancy intervals.

Birth order	Total (n=500)		Inter pregnancy interval						χ^2;d.f.;P value
			<2Y (n=205)		2-4 (n=226)		>4Y (n=69)		
	No	%	No	%	No	%	No	%	
1	106	21.2	40	37.7	45	42.5	21	19.8	16.24;8; 0.039*
2	197	39.5	84	42.6	93	47.2	20	10.2	
3	131	26.3	60	45.8	54	41.2	17	13.0	
4	51	10.2	20	39.2	25	49.0	6	11.8	
5& more	**15**	**3**	**1**	**6.6**	**9**	**60**	**5**	**33.3**	

Table 7: The characteristics of index child in relation to inter pregnancy intervals.

		Total (n=500)		Inter pregnancy interval						χ^2;d.f.;P value
				<2Y (n=205)		2-4 (n=226)		>4Y (n=69)		
		No	%	No	%	No	%	No	%	
Index child status	**Alive baby**	485	97.2	198	40.8	220	45.4	67	13.8	0.742;2; 0.690
	Stillbirth	15	2.8	7	50.0	6	42.9	2	7.1	
Type of pregnancy	**Single**	461	92.2	192	41.6	207	44.9	62	13.4	1.25;2; 0.535
	Twin	39	7.8	13	34.2	19	50.0	7	17.9	
Sex	**Male**	240	48	105	43.8	101	42.1	34	14.5	1.89;2; 0.389
	Female	260	52	100	38.4	125	48.2	35	13.3	
Method of delivery	**NVD**	416	83.2	177	42.5	192	46.2	47	11.3	13.18;2; 0.001*
	CS	**84**	**16.8**	**28**	**33.3**	**34**	**40.5**	**22**	**26.2**	

Among the 500 women studied, 70% (350) practiced breastfeeding, while 30% (150) used bottle feeding. There was no significant association between feeding type and interpregnancy interval (p = 0.399). However, when duration of breastfeeding was analyzed, a significant relationship was found (p = 0.012). Notably, 88 women (25.1%) who breastfed for 6–11 months—nearly half of them (46.6%)—conceived again within less than two years, indicating shorter intervals among those with limited breastfeeding duration. Regarding contraceptive use, 414 women (82.8%) reported using a contraceptive method after the previous delivery, while 86 (17.2%) did not. The majority in both groups had an interpregnancy interval of 2–4 years, and the association between contraceptive use and interval duration was not statistically significant (p = 0.307). When asked about the preferred method of contraception, the most common choices were oral contraceptive pills (42%), followed by intrauterine devices (IUCD) (28.4%), and safe period (14%). In terms of reproductive opinions, nearly half of the participants (48.8%) identified 20–24 years as the ideal age for marriage, and a similar proportion (48.6%) regarded it as the preferred age for childbearing. The majority (67%) of women expressed a preference for having two to three children, reflecting moderate fertility aspirations consistent with global recommendations for optimal family size and birth spacing. In summary, breastfeeding duration emerged as a key determinant influencing interpregnancy spacing, while feeding type, contraceptive use, and reproductive preferences showed no significant impact on actual spacing behavior. As in table 8-11.

Table 8: The breastfeeding practice for index child in relation to inter pregnancy intervals.

		Total (n=500)		Inter pregnancy interval						χ^2;d.f.;P value
				<2Y (n=205)		2-4 (n=226)		>4Y (n=69)		
		No	%	No	%	No	%	No	%	
Breast feeding	**Yes**	350	70.0	140	40.0	157	44.9	53	15.1	1.839;2; 0.399
	No	150	30.0	65	43.3	69	46.0	16	10.7	
Breast feeding duration	**<6 months**	86	24.6	32	37.2	44	51.2	10	11.6	19.53;8; 0.012*
	6-11	88	25.1	41	46.6	39	44.3	8	9.1	
	12-17	85	24.3	42	49.4	32	37.6	11	12.9	
	18-23	18	5.1	6	33.3	7	38.9	5	27.8	
Breast feeding duration; 11.97±7.89 (1-30) months										

Table 9: The distribution of the study group according to use of contraception and inter pregnancy interval duration.

Use of contraception after index child		Total (n=500)		Inter pregnancy interval						χ^2;d.f.;P value
				<2Y (n=205)		2-4 (n=226)		>4Y (n=69)		
		No	%	No	%	No	%	No	%	
	Yes	414	82.8	174	42	187	45.1	53	12.8	2.36,2, 0.307
	No	**86**	**17.2**	**31**	**36.0**	**39**	**45.3**	**16**	**18.6**	

Table 10: The methods of contraception according to woman opinion.

Best method of contraception	Total (n=500)	
	No	%
OCP	210	42.0
Injections	78	15.6
Loop	142	28.4
Safe period	70	14.0

Table 11: The woman opinion regarding preferred age for marriage, child bearing, and preferred number of children.

	Total (n=500)	
	No	**%**
Preferred age of marriage		
<15	**23**	**4.6**
15-19	**62**	**12.4**
20-24	**244**	**48.8**
25-29	**140**	**28.0**
30-34	**31**	**6.2**
Preferred age of child bearing		
<15	**22**	**4.4**
15-19	**46**	**9.2**
20-24	**243**	**48.6**
30-34	**38**	**7.6**
Preferred number of children		
Two	**152**	**30.4**
Three	**183**	**36.6**
Four	**135**	**27.0**
Five	**24**	**4.8**
Six	**6**	**1.2**
Mean Preferred number of children; 3.10±0.93 (median 3)		

DISCUSSION

The present study assessed interpregnancy intervals and their determinants among women attending four major maternity hospitals in Baghdad. The findings revealed that the most common interpregnancy interval was 2–4 years (45.2%), aligning with the World Health Organization (WHO) recommendation of at least 2–3 years between pregnancies for optimal maternal and child health.[4] However, the mean interval of 27.3 months observed in this study was shorter than that

reported in previous studies from Baghdad (31.1 months)[5] and Iran (61 months).[12] This variation may be explained by methodological differences, as the current study assessed interpregnancy intervals rather than interbirth intervals. Maternal age emerged as a significant determinant of birth spacing. Women under 30 years were more likely to have shorter intervals (<4 years), consistent with findings from Saudi Arabia[13], Spain[14], and Iran[12], which showed that younger women tend to have shorter intervals due to higher fecundity and the desire to complete their families earlier. Conversely, older women typically exhibit longer spacing as they approach their desired family size or experience reduced fertility.[13,14] In contrast, age at marriage showed no significant effect, agreeing with Iranian data[12], though other studies from southern Iran[15] suggested that couples marrying later tend to have shorter intervals to compensate for limited reproductive years. Education was not significantly associated with interpregnancy intervals in this study, aligning with research from Saudi Arabia[16], Egypt[17], and Ethiopia.[18] Although education is generally expected to extend birth spacing by increasing awareness and contraceptive use[10], this effect may be attenuated in populations with relatively uniform cultural norms and early marriage patterns. Similarly, parity did not influence spacing, as noted in a Saudi study.[13] While paternal age and place of residence had no significant impact, the expected trend of shorter intervals among rural women was not observed, possibly due to the urban–rural overlap in Baghdad. Living in extended families was associated with shorter intervals, likely due to increased childcare support, a finding consistent with results from Taiwan.[19] A positive association between birth order and interpregnancy interval was found, indicating that higher-order births are spaced further apart. The survival status of the index child also influenced spacing—mothers who lost a child tended to conceive sooner, consistent with findings from Iraq[5], Iran[12,15], and Ethiopia.[20] This is attributed to both psychological and biological mechanisms: the desire to replace the lost child and the early return of fertility due to cessation of breastfeeding.[9] Method of delivery significantly affected spacing, with cesarean deliveries linked to longer intervals. Similar outcomes have been reported in previous studies[21,22], possibly due to medical advice, reduced fertility, or complications following surgery. Breastfeeding duration showed a significant association, where longer breastfeeding delays conception by suppressing ovulation. However, the type of feeding alone was not a significant factor. Contraceptive use did not significantly influence interval duration, in agreement with India[23] but differing from Iran.[12] The oral contraceptive pill was the most preferred method (42%), followed by the IUCD (28.4%), in line with findings from Iraq.[24,25] Finally, most women preferred two to three children, consistent with the I-WISH survey[25], which reported an average desired family size of four children among Iraqi women.

CONCLUSION

In the light of the results of the present study, the following conclusion were made: A good proportion of the study group were practiced a inter pregnancy interval duration of 2-4 years. This study provides some evidence for association between some selected explanatory variables and shorter subsequent inter pregnancy interval including; age of mother at current pregnancy and at birth of index child, birth order, method of delivery, breastfeeding duration, and status of the index child (death of index child). Most of women preferred oral contraceptive pill as method of contraception. The preferred age for marriage according to mother opinion was 20-24 years, and it was the same age preferred for get pregnant, while preferred number of children was three.

REFERENCES

1. Rawe K, Dunford A, Stewart J, Espey J, Stoeckel J. Every woman's right: how family planning saves children's lives [Internet]. Save the Children; 2012 [cited 2012 Nov 5]. Available from: http://www.savethechildren.o/EVERY_WOMANS_RIGHT_REPORT_JUNE_2012.PDF
2. Utah Department of Health, Maternal and Infant Health Program. Facts on birth spacing [Internet]. Utah Department of Health; 2012 [cited 2012 Mar 16]. Available from: http: //health.utah.gov/mihp/
3. Conde-Agudelo A, Belizan JM. Maternal mortality associated with interpregnancy interval: cross-sectional study. BMJ, 2000; 321: 1255–9.
4. World Health Organization. Report of a WHO technical consultation on birth spacing. Geneva (Switzerland): WHO, 2007.
5. Al-Saffar AJ. Iraqi women inter-birth intervals: duration and some determinants of inter-birth intervals in a sample of women from Baghdad, Iraq. Iraqi J Med Sci, 2012; 10(1): 12–21.
6. Rasekh A, Momtaz M. The determinants of birth interval in Ahvaz, Iran: a graphical chain modelling approach. J Data Sci, 2007; 5: 555–76.
7. DaVanzo J, Abd ur Razzaque RM, Hale L. The effects of birth spacing on infant and child mortality, pregnancy outcomes, and maternal morbidity and mortality in Matlab, Bangladesh. Rand Working Paper, 2004; WR-198.
8. Venugopal SV, Upadhyay UD. Birth spacing: three to five saves lives. Popul Rep (Baltimore), 2002; Series L(13).
9. Catalyst Consortium/Tahseen Project. Optimal birth spacing: an in-depth study of knowledge, attitudes and practices. Washington (DC): Catalyst Consortium, 2004.
10. Westhoff CF, Rafalimanana H. Potential effects on fertility and child health and survival of birth-spacing preferences in sub-Saharan Africa. Stud Fam Plann, 2000; 31(2): 99–110.
11. Rasheed P, Al-Dabal BK. Birth interval: perception and practices among urban-based Saudi Arabian

women. East Mediterr Health J., 2007; 13(4): 881–92.
12. Hajian-Tilaki KO, Asnafi N, Aliakbarnia-Omrani F. The patterns and determinants of birth intervals in multiparous women in Babol, northern Iran. Southeast Asian J Trop Med Public Health, 2009; 40(4): 852–60.
13. Al-Almaie SM. The pattern and factors associated with child spacing in Eastern Saudi Arabia. R Soc Health J., 2005; 123: 217–22.
14. Polo V, Luna F, Fuster V. Determinants of birth interval in a rural Mediterranean population. Hum Biol, 2000; 72: 877–95.
15. Baghmalaie M. The associated factors of interval pregnancies in women referred to Bosher health centers. Q Pub Dena, 2005; 1: 14–20.
16. Al-Nahedh NA. The effect of socio-demographic variables on child spacing in rural Saudi Arabia. East Mediterr Health J., 1999; 5: 136–40.
17. Baschieri A, Hinde A. Determinants of fertility and birth interval in Egypt. Demogr Res, 2000; 16: 54–70.
18. Yohannes S, Wondafrash M, Abera M, Girma E. Duration and determinants of birth interval among women of childbearing age in Southern Ethiopia [Internet]. BMC Pregnancy Childbirth, 2011; 11: 38 [cited 2011 Oct 10]. Available from: http: //www.biomedcentral.com/1471-2393/11/38
19. Tsay WJ, Chu CYC. Birth spacing in nuclear and extended families. Institute of Economics, Academia Sinica; 2002 Jul. Available from: cyruschu@sinica.edu.tw
20. Central Statistical Agency (Ethiopia) and ORC Macro. Ethiopia demographic and health survey 2005. Addis Ababa (Ethiopia) and Calverton (MD, USA): Central Statistical Agency and ORC Macro, 2006.
21. Murphy DJ, Stirrat GM, Heron J. The relationship between caesarean section and subfertility in a population-based sample of 14,541 pregnancies. Hum Reprod, 2002; 17: 1914–7.
22. Mollison J, Porter M, Campbell D, Bhattacharya S. Primary mode of delivery and subsequent pregnancy. BJOG, 2005; 112: 1061–5.
23. Tripathi V, Mani K, Kalpana S, Dwivedi SN. Determinants of birth intervals in Tamil Nadu, India: developing Cox hazard models with validations and predictions. J Health Popul Nutr, 2012; 35(2): 289–307.
24. Central Organization for Statistics and Information Technology, Kurdistan Regional Statistics Office, Ministry of Health, United Nations Children's Fund. Multiple Indicators Cluster Survey (MICS-4). Vol. 1: Final report. Baghdad (Iraq), 2011 Oct.
25. Republic of Iraq, Ministry of Planning, Central Statistical Organization, Department of Human Development Statistics, Kurdistan Region Statistical Office, United Nations Population Fund. Iraqi Women Integrated Social and Health Survey (I-WISH): summary report. Baghdad (Iraq), 2011.