


# Knowledge of Birth Spacing Among Women Attending Primary Health Care Centers in Mukalla District, Yemen

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## Abstract

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**Background:** Short birth spacing linked with adversative health consequences for infant, child and maternal mortality also increases the chances of mother and their children survival.

**Objective:** To assess the determinants and the knowledge of birth space amongst women of reproductive age in Mukalla district, Hadhramout Governorate, Yemen.

**Patients and Methods:** A cross sectional study of 384 women of multiplicative ages (15-49 years) was conducted at primary health care centres in Mukalla district. The study was conducted from November, 2018 to Oct 2019.

**Results:** The median birth spacing was 35 months. (50.8 %) of respondents have been committed undersized birth spacing underneath the indorsed interval of ideal delivery spacing. Multivariate logistic V regression revealed that age of mother between 15-24 years (OR 3.255, 95%CI 1.598-6.629, P=0.001), not enough family income (OR 1.867, 95%CI 1.104-3.158, P=0.020), number of living children ≤ 3 children (OR 1.225, 95%CI .532–2.520, P=0.027) and breast feeding duration < 6 months (OR 7.435, 95%CI 1.490 – 37.101, P=0.014) or 6-<12 months (OR 7.320, 95%CI 1.406–38.116, P=0.018) were linked with augmented hazard of short birth spacing, whereas mother's history of chronic disease (OR.026, 95%CI .003-.227, P=.001) and modern family planning methods utilization (OR.208, 95%CI .112-.386, P=0.000) were linked with decreased risk of little birth space. (58.1%) of respondents had high level of knowledge about the birth spacing.

**Conclusion:** Certain factors were significant predictors of short birth spacing in Mukalla's women. This should lead to encouragement of longer birth spacing between births.

**Keywords:** Birth spacing; knowledge; primary health care centers; Yemen

## Introduction

Population growth is a chief encounter in most of evolving nations and Yemen is no exemption to this. Productiveness is a primary constituent of people crescendos that defines the construction of the people in any state [1]. The world's inhabitants has been rising quickly in new eras, Sub-Saharan Africa and Asia predominantly have inhabitants growing proportions that are outstripping their financial development [2]. Analysis of birth spacing is more vulnerable manner for calculating productiveness and it can offer further awareness into the mechanisms of basic alterations in the productiveness [3].

The people of Yemen quickly augmented from 8.1 million in 1980 to 26.8 million in 2015. The present total productiveness proportion is stated to be around 4.5 percent. If this rate is sustained, the people will be about 47 million in 25 years. Thus, it is grave to restrained this further load implicating this fragmented country [4].

Birth space has been recognized by the WHO as one of the six vital well-being interferences that wanted to accomplish innocuous maternity [5]. Birth space is the interval of time amid two consecutive living childbirths [6].

The birth space has been described to have an important consequence on the child's upcoming bodily, and intellectual competences [7]. Family planning programs support 2 years space amid deliveries for infant, child well-being, and their existence. But latest studies recommend that birth space of 3-5 years are benign for moms and offspring as matched to delivery spacing of  $\leq 2$  years [8].

The latest WHO approval for a well gestation intermission is at least 2 years [9] Inappropriately, countless ladies in rising states are merely not capable to accomplish their personal generative aims but are also dropping distant short of 3-5 years space that recent proof recommends are healthiest [10,11].

Delivery Arrangement is essential in child evolution and growth. The child is probable to obtain his complete portion of love, attention with nourishment requirements, when the household extent is insignificant and deliveries are appropriately set apart [12]. Many studies have shown that small delivery spaces ( $< 2$  years) rise mother jeopardies such as 3rd trimester hemorrhage, eclampsia, malnourishment, anemia and mother death. It can result in numerous grave consequences for newborns as well, for instance preterm, low birth weight, miscarriage, newborn death and adversative outcome on intelligent capability, bodily growing and development [7].

Females in evolving states have smaller delivery space than they would wish. The chief cause is not using contraception after delivery and so are probable to develop pregnant once fertility proceeds [13]. Community aspects such as females' teaching, occupation chances, the sum and the gender of living kids also be a factor in defining kid space [14].

In Yemen like many other developing states, fecundity, mother death, and kid death are still extraordinary. Thus, obtaining study founded understanding of these difficulties is key step in undertaking suitable involvement and would be helpful in retelling local and

possibly countrywide strategy producers of how fecundity and birth space state, and to plan suitable policies for inspiring larger use of ideal birth space and thereby guaranteeing further drops in fecundity, mother and kid death.

### Patients and Methods

A cross sectional study was carried out at principal health care centers in Mukalla district (The capital of Hadhramout Governorate, Yemen) in the period between November 2018 to October 2019. Study participants encompassed all mothers of reproduction age (15 to 49 years) who attended primary health care centers for preventive care or to get medical advice or as mothers or caregivers who attended with their children for vaccination or follow-up at the same centers during the study period.

#### Inclusion Criteria

Age between 15 and 49 years experienced at least two deliveries and resident at Mukalla district.

#### Exclusion criteria

Those with a history of primary or secondary infertility, those who were wedded extra than once was omitted to avoid heterogeneity of delivery arrangement for the unchanged lady, those with two or more miscarriages and those with history of miscarriage and stillbirth or child death between last two live births.

#### Sample size

Calculation of mockup size was constructed on the ensuing formulae [15]:

$$\text{Sample size (N)} = \frac{PQ(Z)^2}{(D)^2}$$

We selected six primary health care centers by lottery from the total number of primary health care centers in Mukalla district which are 20 primary health care centers [16]. So

the sample of 384 women (aged 15-49 years) was distributed proportionally among the selected six primary health care centers according to total number of monthly flow rate of women in last three months.

The information was gathered by interviewing person to person using pre-test meeting guide Arabic version. The questionnaire was included women's and their husband's socio-demographic and economic data, determinants of birth spacing, family planning use and the level of knowledge on birth spacing and their sources of information about spacing.

### Statistical Analysis

The questionnaire sheets were reviewed and coded after completion. Data was entered into SPSS- Statistical Package for Social Sciences version 20. Expressive indicators frequency and percentage for categorical variables, the outcome variable was not normally distributed so, median, Interquartile Range (IQR) and mean rank calculated for birth spacing variable. Mann whitney u test and Kruskal wallias test were applied to compare the difference between medians. Kruskal wallias test achieved to match the 3 sets concerning birth spacing duration. While, Mann-whitney u test was achieved for linking 2 groups concerning birth spacing duration. P-value < 0.05 was used to judge importance.

Logistic regression scrutiny was used to estimate Odds ratios of the factors of birth space. The level of knowledge is classified into two categories according to median knowledge (Mertiz-jarratt method) [17] by giving 0 for incorrect answer and 1 for correct answer, therefore we defined the respondent's knowledge as being.

High knowledge: if total knowledge score  $\geq$  median knowledge score and low knowledge: if total knowledge score  $<$  median knowledge score.

involved women was  $29.39 \pm 5.3$  years. The median birth space was 35 months with minimum 10 months and maximum 85 months.

### Results

384 child bearing women were interviewed making response 100%. The mean age of

**Table (1):** Birth spacing relation to socio- demographic- economic characteristics of respondents

Variable	Frequency (384)	Birth spacing			P** value
		Median (months)	IQR*	Mean rank	
Age of mother (years)	15-24	63 (16.4%)	25	18.00 – 35.00	0.000****
	25-35	242 (63.0%)	36	24.00 – 48.00	
	36-49	79 (20.6%)	39	24.00 – 60.00	
Mean $\pm$ SD	29.39 $\pm$ 5.3 years				
Residency	Urban	362 (94.3%)	34	22.75 – 48.00	0.767***
	Rural	22 (5.7%)	36	23.25 – 52.00	
Marriage age (years)	< 20	218 (56.8%)	35	22.00 – 48.00	0.191****
	20-29	154 (40.1%)	36	23.00 – 54.00	
	$\geq$ 30 years	12 (3.1%)	24	21.50 – 42.75	
Mother educational level	No education	87 (22.7%)	33	21.00 – 42.00	0.057****
	Primary	181 (47.1%)	34	22.00 – 48.00	
	Secondary	79 (20.6%)	36	23.00 – 54.00	
	University	37 (9.6%)	37	27.00 – 55.00	
Husband educational level	No education	39 (10.2%)	33	21.00 – 45.00	0.035****
	Primary	178 (46.4%)	33	21.00 – 47.00	
	Secondary	75 (19.5%)	34	25.00 – 52.00	
	University	92 (24.0%)	37	28.25 – 53.50	
Mother occupation	House wife	342 (89.1%)	34.5	23.00 – 49.25	0.538***
	Employed	42 (10.9%)	35.5	22.00 – 45.25	
Husband occupation	Government	83 (21.6%)	37	26.00 – 54.00	0.170****
	Private sector	180 (46.9%)	34	21.00 – 48.00	
	Daily worker	112 (29.2%)	34	23.00 – 48.00	
	Not working	9 (2.3%)	28	18.00 – 38.00	
Family income	Enough	274 (71.4%)	36	24.00 – 51.25	0.019***
	Not enough	110 (28.6%)	30.5	21.00 – 44.25	

\*IQR= Interquartile Range. \*\*p< 0.05 is reflected statistically noteworthy. \*\*\*Mann whitney u test. \*\*\*\*Kruskal wallias test

Table (1) reveals the birth spacing increased significantly with increasing maternal age and high husband education level . Birth spacing was significantly shorter for families

with not enough income. There is no statistically significant association between birth spacing with mother educational level, mother occupation and husband occupation.

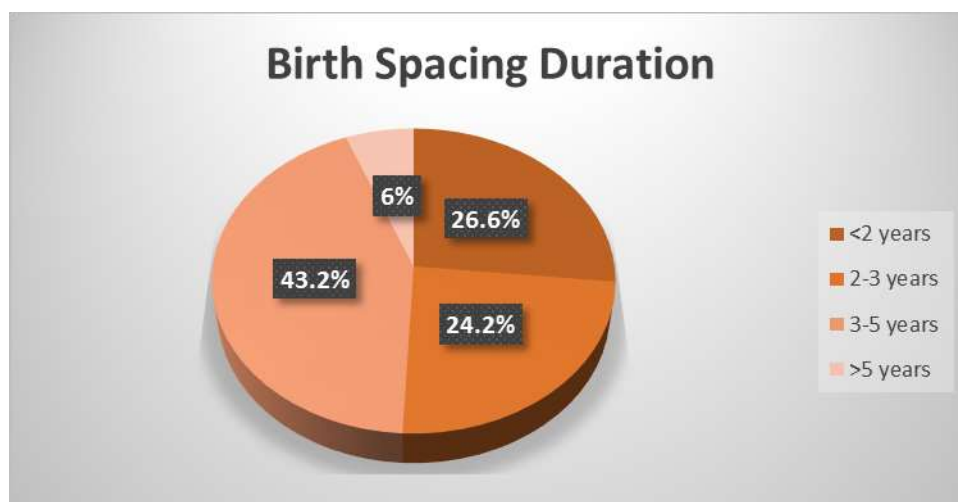


Figure (1): Distribution of birth spacing among respondents

Figure (1) shows that (26.6 %) of respondents had birth spacing < 2 years, (43.2%) had birth spacing 3-5 years and only (6 %) had a birth spacing >5 years. (24.2%) had birth spacing 2-3 year,

Table (2): Birth spacing and their relationship to study variables

Variable	Frequency (384)	Birth spacing				
		Median (months)	IQR*	Mean rank	P** value	
Number of living children	≤ 3 children	249 (64.8%)	33	21.00 – 45.00	180.64	0.001****
	>3 children	135 (35.2%)	37	24.00 – 57.00	214.38	
male to femaleratio	>1	92 (24.0%)	38	24.00 – 54.75	208.91	0.147****
	1	101 (26.3%)	36	23.50 – 46.00	197.51	
	<1	93 (24.2%)	33	23.50 – 52.00	191.15	
	male only	46 (12.0%)	32	21.75 – 37.00	169.96	
	female only	52 (13.5%)	28	21.00 – 42.00	176.11	
Sex of preceding child	Male	190 (49.5%)	36	21.00-67.00	192.87	0.979****
	female	194 (50.5%)	34	23.00-66.00	192.13	
Pregnancy complications	No	217 (56.5%)	36	24.00 – 49.00	201.31	0.114****
	Anemia	104 (27.1%)	31.5	20.00 – 48.00	175.74	
	Hypertension	43 (11.5%)	32	24.00 – 59.00	202.71	
	Others	20 (4.9%)	27.5	22.00 – 40.50	162.13	

<b>Post-partum complications</b>	No complication	320 (83.4%)	34	23.00 – 47.00	188.45	0.396****
	Post-partum hemorrhage	23 (6.0%)	41	21.00 – 56.00	210.46	
	Psychosis	9 (2.3%)	36	27.00 – 56.00	201.89	
	Puerperal Sepsis	23 (6.0%)	45	21.00 – 54.00	217.13	
	Breast complications	9 (2.3%)	37	20.50 – 59.50	218.39	
<b>Breast feeding duration</b>	0-<6 months	76.8 (20.0%)	24	14.00 – 37.00	131.83	0.000****
	6-<12 months	46.08 (12.0%)	25	20.00 – 44.00	164.26	
	12-<24 months	249.6 (65.0%)	37	26.00 – 53.00	214.50	
	≥ 24 months	11.52 (3.0%)	41	34.00 – 54.00	229.32	
<b>History of chronic diseases</b>	Yes	20 (5.2%)	40.50	36.50 – 47.75	248.30	0.021***
	No	364 (94.8%)	35	23.00 – 49.00	189.43	
<b>Family planning</b>	not use	91 (23.7%)	21	15.00 – 35.00	120.74	0.000****
	traditional	62 (16.1%)	32	23.00 – 40.00	174.50	
	modern	231 (60.2%)	39	24.00 – 55.00	225.60	

\*IQR= Interquartile Range. \*\*p< 0.05 is considered statistically noteworthy. \*\*\*Mann whitney u test. \*\*\*\*Kruskal wallias test

Table (2) demonstrates birth spacing was significantly affected by number of living children, the shorter spacing was observed in the women had  $\leq 3$  living children. Male to female ratio, the shortest birth spacing was observed in women had only male or only female but the difference was not statistically significant. The gender of the

preceding child does not appear to affect significantly the interval of spacing. By increasing the length of breast feeding the delivery spacing augmented meaningfully. The delivery spacing was also significant statistical association with mother's history of chronic disease and family planning methods utilization

**Table (3):** Distribution of family planning methods among respondents

Family planning		Frequency (384)	Percent (%)
use of family planning methods in last birth spacing	Yes	293	76.3
	No	91	23.7
Used methods	Traditional	62	16.1
	Safe period	22	5.7
	Withdrawal	17	4.4
	Lactational amenorrhea	23	6.0
	Modern	231	60.2
	Contraception pills	120	31.3
	Copper intrauterine	49	12.8
	Condom	12	3.1
	Injections	17	4.4
	Implanon	33	8.6
	Reasons of not using familyplanning methods	Poor knowledge	5
Wants more children		29	31.8
Husband refuse		22	24.2
Afraid from side effects		16	17.6
Religious causes		4	4.4
Husband absence		13	14.3
Distance of services		2	2.2
Reasons of using familyplanning methods	Economic	46	15.7
	Doctor advice	29	9.9
	Birth spacing	218	74.4

Table (3) clarifies that (76.3 %) of respondents had used family planning method before last pregnancy. Contraceptive pills were the most reported method (31.3%). (23.7%) of respondents

did not practice any household scheduling means. The mutual cause of not practicing household arrangement methods was wanted more children (31.8%).

**Table (4):** Odds ratios for birth spacing < 3 years among respondents using multivariate logistic regression

Variable		*OR	(95% **CI)	P value
Age group	15-24	3.255	1.598 - 6.629	.001
	25-35	1***		
	>35	.658	.356 - 1.218	.183
Husband education	No education	1.229	.484 - 3.118	.664
	Primary education	1.265	.697 - 2.296	.439
	Secondary education	1.600	.789 - 3.246	.193
	University education	1***		
Family income	Enough	1***		
	Not Enough	1.867	1.104- 3.158	.020
Number of alive kids	≤3 children	1.225	.532 - 2.520	.027
	>3 children	***1		
Breast feeding duration	0-<6 months	7.435	1.490 -37.101	.014
	6-<12 months	7.320	1.406 -38.116	.018
	12-<24 months	2.804	.601 - 12.843	.184
	≥ 24 months	1***		
Mother chronic disease	No	1***		
	Yes	.026	.003 - .227	.001
Family planning	Not use	1***		
	Traditional	.828	.378 - 1.812	.636
	Modern	.208	.112 - .386	.000

\* OR: Odds Ratio      \*\* CI: Confidence Interval      \*\*\*Reference category

Table (4) shows the result of multivariate logistic regression analysis reveals six potential factors that had significant forecasters of small delivery spacing. A strongest risk factor of small delivery spacing was breast feeding duration 0-<6 months then 6-<12 months and age group (15-24) years,

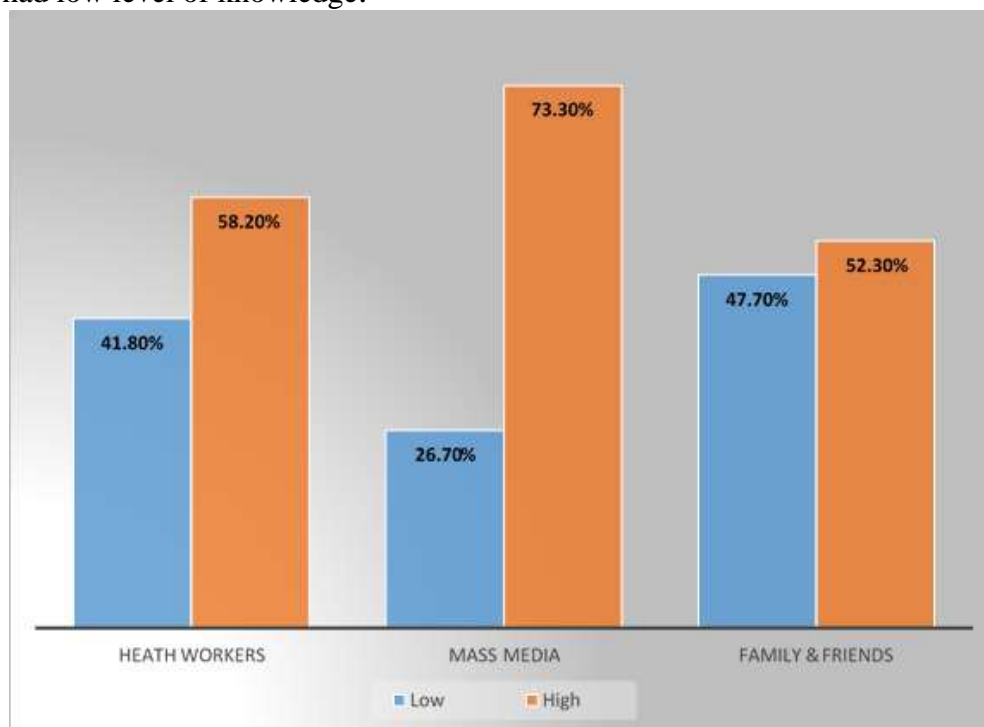
not enough family income and women with ≤ 3 children. Other factors that found significantly associated with decreased risk of short birth spacing (protective factors) were mother’s history of chronic disease and use of modern methods of family planning.



**Table (5):** Knowledge the respondents about birth spacing

Variable		Frequency (384)	Percent (%)
Hearing concept of spacing	Yes	252	65.6
	No	132	34.4
Meaning of birth spacing	Planning for pregnancies	181	71.8
	Using contraception	41	16.3
	Delivering smaller numbers of children	30	11.9
Optimal birth spacing	< 2 years	18	7.1
	2-3 years	67	26.6
	3-5 years	141	56.0
	>5 years	26	10.3
Knowledge category	Low knowledge	161	41.9
	High knowledge	223	58.1
Source of birth spacing information	Health workers	127	33
	Mass media	77	20.2
	Family and friends	170	46.8

Table (5) reveals that (58.1 %) of respondents had high level of knowledge and (41.9%) had low level of knowledge.



**Figure (2):** Knowledge the respondents about source of spacing information

Figure (2) shows (73.3 %) of respondents that had high knowledge level mentioned mass media as source of birth spacing information, in comparison to (58.20 %) for health workers source and (52.30%) for family and friends.

## Discussion

The present study finding reveals the need of the Yemeni society for additional kids and consequently for large-sized families.

The median birth spacing in this study was 35 months slightly higher than data from Yemen National Health and Demographic Survey which show median birth spacing in Yemen was 32 months [1]. Preliminary results from the Egypt Demographic and Health Survey reported that median birth spacing in Egypt is 35.5 months [18]. Yohannes et al found the median length of actual delivery spacing was 33 months in Southern Ethiopia [13].

We found in this study (43.2 %) were in recommended range 3- 5 years compared with (36%) which reported by Yohannes et al in Ethiopia [13]. These findings could be reasonably explained that Muslim communities have been guided by Quran in which in three diverse Suras have designated circuitously the ideal delivery spacing period by identifying a recommended interval of 24 months for breast-feeding and suckling range from 24 to 30 months [19], this would mean that a least delivery spacing fluctuating from 2.5–3.0 years is suitable.

The results show significant association between birth spacing and maternal age, women who were married after age of 30 years had short spacing compared with those married early similar to that reported by Youssef et al in Jordon [20]. This has been

accredited to the drop in fertility by age as a consequence of ovarian and hormonal faulty, but Hajian et al in northern Iran [21] reported insignificant link between delivery spacing and wedding age.

In current study there was insignificant link between birth spacing and residence. The study finding was congruent with finding from Saudi Arabia by Abdel-Fatah et al [22] and Iran by Hajian et al [22]. On the other hand, Baschieri et al in Egypt [23] and Yohannes et al [13] in Ethiopia shown, that countryside ladies were more probable to have small delivery spacing than Urban ladies this difference may be due to small sample size from rural areas in our study.

The ladies who had completed secondary school or had college level of education had longer birth spacing than those who had no formal education, but this difference was not statistically significant. Similarly, with study in Saudi Arabia conducted by Rasheed and Al Dabal *et al* [24]. This can be partially clarified by the statement that cultivated ladies are well knowledgeable about ideal health attention selections and have larger independence to take judgements and practice worth healthiness care facilities.

Birth spacing in this study showed no statistically significant difference between employed and house wife women nearly to that reported from Iran by Fallahzadeh et al [25]. Other study in Saudi Arabia revealed that birth spacing for employed women were statistically significant longer than with unemployed women [22]. Rabbi et al in Bangladesh reported employed women found to have 11 percent larger birth spacing than that of non-employed women [26].

Regarding to husband education we found in this study that women whose husband educated higher than secondary school level had significant longer birth spacing similar to study conducted in South West Ethiopia [8]. Study in Myanmar found insignificant link between delivery spacing and husband education [7]. In our society where lady takes her reproductive judgment with the permission of her spouse may be making this result difference.

Regarding husband occupation, the results revealed that husband occupation did not affect the span of interval between two consecutive live. This consistent to study in Myanmar that showed insignificant link between delivery spacing and husband occupation [7].

Family income was also a solid prognosticator of delivery spacing, the odds of having small delivery spacing were greater for moms who are related to group of family income not enough nearly to study finding by Abdel-Fatah et al [23]. Also study conduct by Yohannes et al [13], Hailu and Glute et al [27] and Tsegaye *et al* [8] showed that the interval of delivery spacing augmented with growing prosperity index. Birth spacing amongst opulent individuals is broader due to participation of more expenditures in kid rearing due to great life style.

The birth spacing augmented progressively with rise in the sum of living kids. The shorter spacing was observed when the women had  $\leq 3$  living children. Alike clarifications had been described that underline the small delivery spacing amongst ladies of little parity [22, 21, 20].

In this study the shorter birth spacing was observed when women had only male or only

female sexes but the difference was not statistically significant, a study carried out by Abdel-Fatah et al [22] showed that birth spacing was affected significantly with male to female child ratio. Unlike study conducted in Southern Ethiopia [13] and Manipur [28] that found length of birth spacing of the ladies whose preceding kid is male is expressively longer than that of those whose preceding kid is female. These variations could be related to the differences in sex preference among different cultures.

The mother's pregnancy and postpartum complications in preceding pregnancy were not associated significantly to the length of birth spacing consistent to that reported by Abdel-Fattah et al [22].

The longer birth spacing is associated with longer duration of breast feeding, breast feeding for 12-24 months and  $>24$  months was found to be significant predictor against short spacing which consistent with study by Youssef et al in Jordon [20]. These results similar also to those were described by Baschieri et al and Hinde et al in Egypt [23] and Hajian et al in Iran [22], breast-feeding is accompanying with a deferment in the reappearance of ovulation after delivery and henceforth is a significant element in rising delivery spacing.

The birth spacing was also influenced by mother's history of chronic disease similar to finding from Saudi Arabia [22].

Modern family planning application before attaining pregnancy for the latest kid had shown important statistical link with delivery spacing in our study similar what was found by Youssef *et al* [20] and Hailu et al [27].

In the current study, (76.3%) of questioned ladies had used family planning methods.

Moreover, modern contraceptive means were professed by (60.2%). Oral contraceptive pills were the most principally used (31.3%) followed by IUCD (12.8%) as in Saudi Arabia [24]. The study in Myanmar by Nyein et al revealed that (70%) of the respondents used the contraceptive means before last confinement [7]. In Jordan modern contraceptives were used in only (32.1%) [20].

Most of the ladies who used household arrangement means said kid spacing as the most common cause for using them (74.4%). Instead ladies who were not used any household arrangement means desired to have additional kids (31.8%) consistent with study in Qatar conducted by Arbab et al [29].

In this study (56.0 %) reported the optimum delivery spacing between 3 and 5 years. On the other hand, study conducted by Nti et al in Ghanaian women reported that (55%) indicated that they thought spacing childbirths between 1-2 years was suitable [30]. This presupposes that teaching requirements to be strengthened to guarantee that more moms agree and exercise spacing childbirths using the existing correct delivery spacing time.

Health workers was the main source of information among respondents in current study like a study piloted in Ghanaian women [30].

## Conclusions

More than half of respondents (56 %) had known the optimal birth spacing. Accordingly, (43.2 %) practice optimal birth spacing and (58.1%) of respondents had high level of knowledge. Nevertheless, delivery spacing of kids varied with diverse biological, medical and socio-economic

influences of their clans. Age of mom 15-24 years, low family income,  $\leq 3$  living children and breastfeeding duration less than 12 months were found to be important forecasters of small delivery spacing interval. On the other hand, mother's history of chronic disease and modern family planning methods utilization were found to be noteworthy protecting of small delivery spacing.

## Recommendations

Ensure health education for mothers about the sequences of short birth spacing on health of mother and child. Provide data, edification and communiqué imparting precarious care to ladies and their spouses to progress their attentiveness about the significance of recent contraceptive application, breast-feeding and ideal delivery spacing. To practice an active household arrangement means before trying to become pregnant again and entirely breast-feed for a minimum of six months and space childbirths at minimum of three years separately.

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**Ethical clearance:** Ethical approval was obtained from the College of Medicine / University of Diyala ethical committee for this study.

**Conflict of interest:** Nil

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## المعرفة للمباعدة في الولادات بين النساء المترددات على مراكز الرعاية الصحية الأولية في

### مديرية المكلا، اليمن

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### الملخص

**خلفية الدراسة:** ارتبطت الفترات الزمنية القصيرة بين الولادات المتتابعة بنتائج صحية عكسية، منها وفيات الرضع والأطفال والأمهات. كما تحسن فرصة إبقائهم على قيد الحياة.

**اهداف الدراسة:** لتمييز أمرين هما محددات المباعدة بين الولادات ومستوى المعرفة للنساء في سن الانجاب بمديرية المكلا. **المرضى والطرائق:** أجريت دراسة مسح مقطعي في المراكز الصحية الأولية بمديرية المكلا محافظة حضرموت- اليمن في الفترة ما بين نوفمبر ٢٠١٨ وحتى أكتوبر ٢٠١٩، وتم استخدام أسلوب الاعتيان متعدد المراحل لاختيار ٣٨٤ سيدة من المتزوجات اللاتي تتراوح أعمارهن بين ١٥ و ٤٩ عاما وأنجن طفلين أو أكثر. وتم جمع البيانات عن فترة المباعدة الأخيرة، والعوامل الديموغرافية والاجتماعية، والتاريخ الولادي للأمهات، والعوامل البيولوجية والطبية، واستخدام وسائل تنظيم الأسرة ومستوى المعرفة بالمباعدة بين الولادات باستخدام استبيان أثناء المقابلة.

**النتائج:** أظهرت الدراسة أن المدة الوسطية للفترة بين الأحمال كانت ٣٥ شهراً. كما كشفت الدراسة أن ٥٠،٨٪ من النساء المشاركات يمتلكن فترة مباعدة قصيرة. الانحذار اللوجستي المتعدد أظهر أن عمر الأم من ١٥ إلى ٢٤ عام ، الدخل الاسري الغير كاف ، عدد الأطفال الأحياء أقل من أو يساوي ٣ أطفال، مدة الرضاعة الطبيعية أقل ٦ شهور أو من ٦ إلى ١٢ شهر، كلها عوامل مرتبطة بزيادة خطر المقاربة بين الولادات ،بينما تاريخ إصابة الأم بالأمراض المزمنة وكذلك استخدام وسائل منع حمل حديثة كانت عوامل مقللة لخطر المقاربة بين الولادات . وأظهرت الدراسة أن ١،٥٨ ٪ من المشاركات يمتلكن مستوى معرفة عالٍ بالمباعدة بين الولادات.

**الاستنتاجات:** بينت الدراسة أن عوامل معينة كانت محددات هامة للفترة الفاصلة بين الولادات لنساء المكلا. ويحتاج إلى دراسات أخرى للتحقيق في وجود علاقة سببيه. ومن الضرورة العمل على القيام بجهود منسقة لإطالة مدة الرضاعة الطبيعية وتشجيع استخدام وسائل تنظيم الأسرة الحديثة وتشجيع فكرة العائلة الصغيرة.

**الكلمات المفتاحية:** المباعدة في الولادات، المعرفة، الرعاية الصحية الأولية، اليمن

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