

Mothers' practices during pregnancy, lactation and care of their children in Riyadh, Saudi Arabia

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ABSTRACT

Objective: To study mothers' practices during pregnancy, lactation and care during the first 2 years.

Methods: A cross section study was carried out in 5 Primary Health Care Centres (PHCC) in Riyadh, Kingdom of Saudi Arabia. Two hundred and fifty women (50 from each PHCC) who have children less than 2-years of age who visited the selected PHCCs during the study period were selected by systematic random sampling. Data was collected via a questionnaire which contained sociodemographic characteristics of the mother and their children and mothers' practices during pregnancy, lactation and the care of their children.

Results: Approximately 73% of the mothers breast fed their children initially but only 37.6% are currently breast feeding their children. The majority of the mothers started

breast feeding during 1-8 hours after delivery, 63% added supplementary foods to their children at 4-8 months. The majority of mothers visited antenatal clinics during pregnancy, vaccinated their children and followed up their children in well baby clinics. Half of the mothers are currently using contraceptives and 19% are consuming less food during pregnancy. The mothers' educational level was the most important factor associated with mothers' practices.

Conclusion: Some mothers' practices during pregnancy, lactation and child care needs corrective intervention

Keywords: Practices, child care.

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Health interviews surveys have become an increasingly common source of information regarding knowledge, attitudes, behavior, different aspects of health and morbidity patterns in many countries including developing ones. The information collected was found to be valid and can be depended on even for children morbidity.^{1,2} The practices of mothers during pregnancy affect both the mother and her unborn child. The practices of mothers for their new born children care are highly associated with the health status of their children. Many international

studies reported mothers' practices which adversely affected theirs and their children health status. These were thought to be due to gaps in knowledge and false beliefs.³⁻⁵ Some hospital based studies in the Kingdom of Saudi Arabia (KSA) reported similar findings.^{6,7} The present communication, which is part of a wider study, attempts to study selected mothers' practices during pregnancy, lactation and their practices in caring for their children during the first 2 years of their life in Riyadh, KSA. The Primary Health Care Centers (PHCCs) were chosen for the

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study as we think they are the most appropriate settings. They cover the whole of Riyadh, KSA mostly near consumers homes, totally free of charge and the maternal and child health services are among the most important components delivered. The findings are discussed according to the sociodemographic characteristics of the subjects studied. Such information can be useful in efforts to consolidate favorable and positively modify faulty practices.

Methods. The subjects included all mothers who have children aged 24 months or less and who attended PHCCs in Riyadh, KSA at the time of the study. The mothers were interviewed via a structured, validated, pilot tested, modified questionnaire regarding antenatal care, food intake during pregnancy, contraceptive use post delivery, breast and bottle feeding in addition to weaning practices, child vaccination and periodic child weighing. Sociodemographic data regarding the mothers and their children were also collected. The validity of the questionnaire was assessed by 3 independent judges (specialists in Public Health, Nutrition and Nursing) who gave an overall validity of 86.7%. The reliability of the questionnaire was assessed using Chronbach alpha coefficient, which measured .089. The subjects (50 from each of 5 selected PHCCs) were chosen by systematic random sampling The PHCCs themselves were selected by simple random sampling from the 5 regional zones in Riyadh, KSA (one PHCC from each zone).

Data was collected by trained students in the Nutrition Program of the College of Applied Medical Sciences of King Saud University, Riyadh, KSA. Collected data was checked for completeness before entry into a personal computer. Data analysis was carried out using statistical package for social sciences (SPSS) program for Windows version 10. In addition to the usual descriptive statistics, chi square was used to study associations of mothers' practices with their sociodemographic characteristics as well as multiple regression analysis to identify factors predicting mothers' practices.

Results. Of the total 250 subjects interviewed, 13 (5.5%) were excluded from final analysis due to various deficiencies in their records. **Table 1** shows the sociodemographic characteristics of the sample studied. As can be seen more than half the children were less than one year of age whose mothers married at age 19-24 years, 7-12 years of formal schooling, but only 27% of them are employed outside the home. **Table 2** profiles the mothers' practices during pregnancy, lactation and their practices concerning care of their born children during their first 2 years of life according to their mothers'. Eighty percent of the mothers visited

Table 1 - Sociodemographic characteristics of the study sample n=237.

Characteristic	n (%)
Age of child in months	
1-6	58 (24.5)
7-12	64 (27)
13-18	69 (29.1)
19-24	46 (19.4)
Current age of mother	
18-24	117 (49.4)
25-34	39 (16.5)
35-42	81 (34.1)
Mothers' age at marriage	
12-18	81 (34.1)
19-24	119 (50.2)
25-34	35 (14.8)
35-45	2 (0.8)
Years of schooling	
0	20 (8.4)
1-6	43 (18.1)
7-9	45 (20)
10-12	74 (32.2)
13-24	55 (23.3)
Mother working outside home	
Yes	64 (27)
No	173 (73)
Who takes care of the children if working outside	
Child accompanies mother	2 (3.1)
Relatives	17 (26.6)
Friends/Neighbors	2 (3.1)
Housemaid	35 (54.7)
Nursery	8 (3.3)
n - number	

antenatal clinics during the last pregnancy and 48% used some form of contraceptive. Only less than one-third consumed more food during pregnancy and 19% consumed less food. Approximately 65% of the mothers breast fed their children initially but only 38% (59% of initial breast feeders) are currently breast feeding their children. As can be seen half of the mothers started breast feeding during one-8 hours after delivery. Less than one-third of mothers breast feed immediately after delivery to increase milk supply and sustain breast feeding, 2-thirds introduced food supplements to their children at 4-8 months of age. Almost 95% of mothers vaccinated their children according to the national immunization children program, but only 74% took them regularly to children follow-up clinics. The most important factor associated with most of these practices is mothers' education and the important significant results (P<0.05) are depicted in **Table 3**. As can be seen antenatal follow up, consumption of more food during pregnancy, current breast feeding and quick initiation of breast feeding after delivery were significantly more in literate mothers. Other

Table 2 - Mothers' practices according to mothers sociodemographic characteristics.

Practice	n (%)	Significant variables	P value
Antenatal Care	186 (79.5)	Education Child care	0 0.0008
Contraceptive Use	113 (47.7)	Age at marriage	0.018
Food intake during pregnancy			
More than usual	78 (32.9)	Education	0
As usual	80 (33.8)	Child care	0.001
Less than usual	44 (18.6)		
Do not remember	35 (14.7)		
Breast Feeding			
Ever	153 (64.6)	Non education	0.007
Current	90 (39.2)	Employment Age at marriage	0 0.006
Weaning			
< 4 months	59 (24.9)	Education	0
≥ 4-8 months	153 (64.6)	Age at marriage	0.001
9+ months	14 (5.9)		
Do not remember	11 (4.6)		
Practices to continue breast feeding (BF)			
BF immediately after delivery	81 (34.2)	Education	0
Avoid bottle feeding	62 (26.1)		
Frequent breast feeds	58 (24.5)		
Breast hygiene	7 (3)		
No specific practice	29 (12.2)		
Child illness practice			
Consult somebody for advice	159 (67)	Child age	0
Whom consulted			
Hospital	61 (39.1)	Education	0.041
Health center	82 (52.6)	Employment	0.025
Private health sector	4 (2.6)	Child care	0.029
Relatives/friends	7 (4.5)		
Others	2 (1.2)		
Child vaccination			
Vaccinated	225 (94.9)	Mothers' age	0.008
Child follow-up in well baby clinics			
Regular follow-up	175 (73.8)	Age at marriage	0.019
Onset of breast feeding after delivery			
Within one hour	26 (28.9)	Education	0.0031
Within 1-8 hours	346 (51.1)	Age at marriage	0.008
After more than 8 hours	13 (14.4)		
Do not remember	5 (5.6)		
n - number			

sociodemographic characteristics showing significant association with certain mothers' practices include mothers' age and age at marriage and mothers' employment outside the home. Mothers aged 34 years and above followed up their children significantly more than younger mothers (89% compared to 72%). Contraceptive use was significantly more in mothers married less than 35 years of age, food intake during pregnancy was significantly less in women married at age less than 18 or more than 34 years of age (16% compared to

40% in age group 19-34 years of age). Forty-two percent of mothers married at age less than 19 years of age breast feed immediately after delivery compared to less than 29% in those aged 19 years and above. Contraceptive use was significantly more in mothers married less than 35 years of age. Multiple linear regression analysis was performed to predict which sociodemographic factors predict favourable practices and results showed literacy and mothers age at marriage are the only factors significantly predicting practices. Literate mothers

Table 3 - Mothers' practice showing significant association with mothers' educational level (P<0.05).

Mothers' practice	Education level (years of schooling)				
	Illiterate (0) %	Elementary (One-6) %	Intermediate (7-9) %	Secondary (10-12) %	University (13+) %
Antenatal care	35	74.4	86.7	81.1	87.3
More food intake during pregnancy	15	34.9	35.6	33.8	34.5
Current breast feeding	10	20.9	40	37.8	60
Breast feeding during first hour after delivery	0	11.1	27.8	28.6	36.4
Weaning at 9 months or after	10	7	4.4	2.7	1.9
Consult PHCC for advice	60	64	45.5	52.7	46.2

PHCC -primary health care center

who were married at age 19-24 years tend to have favorable practices.

Discussion. Mothers are generally considered among the most important frontline health care providers. Their knowledge, attitudes and more important their practices need to be assessed as they can have tremendous effect not only on themselves, but more important on their family members particularly their children. Hence these practices need to be assessed and studied to boost the positive and correct and modify the negative aspects. The findings of this study showed that some of the practices need corrective intervention. More than half the mothers consume food items during pregnancy in the same prepregnancy frequency and pattern or even less and that the average daily intake of Saudi pregnant mothers is far from satisfactory in many food groups including milk and milk products, meat and vegetables.⁷⁻¹¹ Throughout the world, pregnancy and lactation are considered to be periods of vulnerability to the well being of both mother and child. When mother's diet during pregnancy does not supply the required nutrients for her needs and her fetus needs, the fetal requirements are met by withdrawing from the tissues of her body. This depletion can lead to complications in both mother and fetus such as low birth weight.¹² These mother practices concerning food intake during pregnancy was associated with faulty beliefs and deficient knowledge.⁴⁻⁷ On the other hand, the practice of antenatal care of mothers is much more favorable where 80% of mothers contacted antenatal clinic during pregnancy but we could not assess the frequency of contacts. Previous studies showed that 62% of all pregnant women made only 1-4 visits during the whole pregnancy,¹³ whereas the policy called for and ideal 14 visits for

normal pregnancy and a minimum accepted of 5 visits.¹⁴ This needs to be further studied to identify the reasons behind that to make sure that pregnant women complete the necessary visits. In our study more educated women tend to visit antenatal services significantly more as was reported in previous studies.^{10,13} The practice of breast feeding is posing serious concern. Breast feeding was the usual practice in the past. Unfortunately it is showing rapid decline in all areas and sectors of the community. Only 73% of mothers breast fed their new borns initially but this percentage dropped to less than 38% at the time of conducting the study in children less than 2 years of age which are comparable findings in a recent national study.¹⁵ This genuine decline in incidence, prevalence and duration of breast feeding, which is now prevalent even among less educated rural communities¹⁶ needs to be stopped and later reversed. Only 2 decades ago breast feeding was the usual practice for a mean of 15 months duration in Arab and Muslem countries including KSA.¹⁷ If this trend is not checked then the situation can further deteriorate as happened in neighboring countries such as Kuwait where 42% of all new born were not breast fed at all, and 33% were put on mixed feeding immediately after delivery with a duration of less than 5 months.¹⁸ Religious and health education in health, educational and social institution and facilities may prove useful in checking and reversing this decline trend Breast feeding is no doubt beneficial to both child and mother. About half the breast feeding mothers started breast feeding within 1-8 hours of delivery with almost a 3rd breast feeding immediately after delivery and this practice is welcomed and needs to be encouraged in all breast feeders. In general significant differences in

favorable breast feeding practices were associated with literacy of mothers and age at marriage and this was confirmed by results of multiple regression. However the declining incidence and prevalence of breast feeding is a cause for concern. Efforts are urgently needed to stop and reverse this trend. The experience of countries can be helpful in this respect. Intervention to increase breast feeding based in antenatal and maternity services and those centered around breast feeding by objectives along with financial penalties appear to be successful.^{19,20} It is important not only to convince mothers to breast feed but to do this properly. Studies in other countries reported that 29% of women breast fed their babies within a few hours after birth in Pakistan²¹ and 50% in England and that was significantly more in the educated, those who received health education during pregnancy and those who were breast themselves by their mothers.²² In many other communities, however, breast feeding is usually delayed to the 3rd day after delivery as the colostrum is considered harmful to the new born child.^{5,23} About 78% of mothers in our study weaned their children at age 4-8 months with mothers older than 35 years of age and less than 6 years of schooling delaying weaning to child age of 9 months or even later. Previous studies showed that Saudi mothers wean their children at ages 6-18 months.^{11,24} It appears that weaning practices of mothers in KSA need corrective intervention emphasizing that it should be gradual and not earlier than 3 or later than 6 months as this, currently, is the state of the art. It is gratifying that 95% vaccinated their children with the required vaccine according to the Expanded Programme of Immunization of the country and there were no significant differences according to mothers' education, occupation or age. There is however room for further increase of the coverage by sending reminder letters and flexible vaccination schedules as has been proved successful in some countries.^{25,26} The childrens follow-up visits to well baby clinics needs corrective intervention as only 78% are practicing that regularly. No significant differences could be detected according to the sociodemographics apart from mother age at marriage. It is gratifying that more than half the mothers contact PHCCs for advice regarding health matters and mothers with a lower level of education tend to practice that significantly more, than higher educated mothers who tend to contact hospitals for advice. Previous studies showed that mothers contacted non-health professionals for advice regarding diarrhea in their children.²⁷ The contact of PHCCs should be encouraged and it is more convenient, less expensive, less time consuming and more appropriate to contact first PHCCs for help in health matters. If the need arises, then referral to the proper facility or program is logical practice.

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