Comparative Study of Knowledge and Attitude toward Breastfeeding Practices among Egyptian and Saudi Mothers in Qassim Region

Fathia A. Mersal[1], Hanan M. Mohamed Tork[2] and Hala M. Mohamed Hussein[1]

Department of Community Health Nursing. Faculty of Nursing, Ain Shams University, Egypt
Department of Pediatric Nursing. Faculty of Nursing, Zagazig University, Egypt
khomarkh@yahoo.com

Abstract: Background: Approximately 52 % of babies in Saudi Arabia are breast fed for more than 6 months compared with approximately 96% in Egypt. Few studies compared the infant feeding of these two neighboring countries despite the similarities in their social systems. **Objectives:** The present study aimed to compare knowledge and attitude toward breastfeeding practices among Egyptian and Saudi mothers in Qassim region. **Methods:** A descriptive explorative study was conducted. The data was collected from 340 mothers (191 Egyptian and 149 Saudi) including socio-demographic data, mother's knowledge and attitude towards breastfeeding and the practices. **Results:** exclusive BF was reported by 74.6% of Egyptian compared to 42.1% of Saudi mothers with highly statistically significant difference. The mean duration of breast feeding was 17.5 months among Egyptian compared to 8.1 months among Saudi mothers. Both Egyptian and Saudi mothers had a high level attitude toward BF practice. **Conclusion:** Research in infant feeding should be a health priority to improve the rate of breastfeeding and to minimize other inappropriate practices. Most of the Egyptian and Saudi participants who ceased breastfeeding attributed this to return to work; consequently governmental policies regarding longer leave for new mothers and child care centers inside large institutions should be considered. More effort is needed to support and encourage breast-feeding particularly in Saudi Arabia.

[Fathia A. Mersal, Hanan M. Mohamed Tork and Hala M. Mohamed Hussein. **Comparative Study of Knowledge and Attitude toward Breastfeeding Practices among Egyptian and Saudi Mothers in Qassim Region.** Life Sci J 2012; 9(3):308-314]. (ISSN: 1097-8135). http://www.lifesciencesite.com. 42

Keywords: breastfeeding, practice, knowledge, attitude, Egyptian and Saudi mothers, Qassim

1. Introduction

Breastfeeding has been accepted as the most vital intervention for reducing infant mortality and ensuring optimal growth and development of children (Ekambaram *et al.,* 2010). Various researches have proven that breastfeeding (BF) has enormous advantages not only to infants and mothers, but also to families and society; these include health, nutritional, immunologic, developmental, psychological, social, economic, and environmental benefits (Adtin *et al.,* 2006). One and a half million deaths among infants could be avoided each year if all infants were breastfed exclusively during the first six months of life (Al-Akour *et al.,* 2010) and estimates predict that improved breast-feeding practices could save the lives of 1.5 million children per year (UNICEF, 2008) .

Khassawneh *et al.* (2006) stated that to improve rates of full breastfeeding, specific information regarding the beliefs and practices that influence this outcome is needed[5]. In addition, one of the factors known to play a role is attitude towards infant feeding; moreover, mothers' breastfeeding attitudes are known to influence infant feeding choice (Laanterä *et al.,* 2010).

Measures of psychosocial variables such as knowledge, attitudes, beliefs and experiences can improve the prediction of feeding behavior, or be used as outcome measures relating to the behavior itself. Such measures are important for both researchers and policy makers to provide services that meet the needs of breastfeeding mothers and to inform robust evidence-based practice for health professionals (Chambers *et al.,* 2007).

According to Zhou *et al.* (2010) education and promotion of breastfeeding have become a public health focus worldwide. Breastfeeding practices and attitudes are influenced by demographic, biophysical, social, cultural and psychological factors.

Recent studies in Saudi Arabia showed a decline in breastfeeding between the ages of 6 and 12 months and the introduction of bottle formula has been become more frequent at earlier infant ages. The majority of mothers start to breastfeed their infants but soon introduce a bottle feeding (El-Gilany, 2010) , while in Egypt prolonged breastfeeding is encouraged, where Egyptian women, especially those from a rural background, depend on breastfeeding as the major source of infant feeding for a long time; usually for 2 years (Shaaban & Glasier, 2008).

The purpose of this study is to compare knowledge and attitude toward breastfeeding practices among Egyptian and Saudi mothers in Qassim region. In the hope of understanding the reasons behind the notable differences. The findings of the present study may participate in altering the breast-feeding

promotion strategies, particularly in Saudi women where the situation remains alarming.

2. Methods

Study design and participants

A descriptive explorative study was utilized to meet the aim of this study. A sample of 340 Egyptian and Saudi married women aged 18 years and above, living in Qassim region and had one child at least; aged to a maximum of 3 years to diminished the risk of recall bias were included in the current study. The total number of Egyptian mothers was 191 and the total number of Saudi women was 149. A 'snowball' technique was used to increase sample size, i.e. participants were requested to spread word of this study and distribute the questionnaires to their friends or relatives. Twenty-three of the study sample showed their unwillingness in participation in the study due to various reasons including illnesses and shortage of time. Also 12 of them were excluded due to incomplete data. The study was conducted in Qassim University, female section and other Nongovernmental Organizations (NGOs) in Qassim Region.

Tool of data collection

A self-administered questionnaire was used to collect data; the questionnaire consisted of four sections. **The first section** included data regarding participants' socio-demographic characteristics including: mother age (years), level of education, monthly family income, number of children and occupation. **The second section** included data concerning practice of breast feeding including: duration of breast feeding, source of information about breast feeding, problems and obstacles related to breast feeding, exclusive breast feeding for 6 months, type of feeding, cessation of breast feeding before 2 yrs, causes and duration of cessation of breast feeding. **The third section** included knowledge toward breast feeding practice, knowledge about breastfeeding practices including benefits, duration and exclusiveness of breastfeeding for six months, types of other feeding …etc. The responses to the questions were "yes", "no" or "don't know" was obtained from the 20-item questionnaire. **The fourth section** concerning the data on attitude toward breast feeding practice, including beliefs, feelings, and intention to breastfeed, the questions used the 5-point Likert scale from strongly agree to strongly disagree. There were 15 items, either positive or negative: The scores were then calculated for the mean scores which were then categorized as follows: Mean scores < 2.5 = low level of attitude, Mean scores = 2.5 - 3.5 = moderate level of attitude and Mean scores > 3.5 = high level of attitude.

The questionnaire was adopted from Hengsiri (2003) and modified by the researchers to accommodate with the cultural differences and translated into Arabic language using back translation technique. The questionnaire was revised and validated by committee of 10 experts; also pilot study was carried out on 10 mothers, whom were not included later in the study sample to test clarity, simplicity and applicability of the study tool.

Data collection and analysis

A self-administered questionnaire was used to collect data from Egyptian and Saudi mothers. The study was conducted between October 2010 and April 2011. Data were analyzed using the Statistical Package for Social Sciences (SPSS) windows version 16. Chi-square was used to compare between two groups. A *p*-value of 0.05 or less was considered as statistically significant.

3. Results

A total of 340 women participated in the study. The mean age of Egyptian women was 38.84±4.52 years while the mean age of Saudi women was 34.01±6.5 years. Regarding education, table (1) showed that more than half of Egyptian and Saudi women (52.9%) and (58%) respectively had higher education, also it showed that nearly (80%) were worked and the majority of them had sufficient income, also nearly half of the participated women had one to two children (Table 1).

Table (2) illustrated that the majority of Egyptian and Saudi women (92.7%, 89.3%) respectively were practice breast feeding. As regards to the duration of breast feeding, Egyptian and Saudi women (67.8% & 20.3%) respectively their duration was more than 18 months, also the mean of duration among Egyptian was 17.51±7.74 months while among Saudi was 8.11±7.25 months with highly statistically significant difference (P<0.00.).

In accordance to exclusive BF the table showed that (74.6%) of Egyptian women and (42.1%) of Saudi women were practice BF exclusively with highly statistically significant difference. In relation to most common types of feeding of not exclusive BF was artificial feeding. Regarding to weaning, the results clarified that (48%, 69.2%) of Egyptian and Saudi women respectively were weaned their children before 2 years with highly statistically significant difference.

Figure (1) showed that, in accordance to the source of information about BF the highly percent was mother followed by physician and media for both groups. Figure (2) showed that the most common problems related to BF practice among Egyptian women were nipple fissure and sleeplessness (27.7% , 23.6%) respectively while increase number of BF and nipple fissure (16.8%, 15.4%) respectively were the most common problems among Saudi women.

The present findings illustrated that the most common reasons of cessation of breastfeeding among

Egyptian and Saudi women (23.7%, 27.8%) respectively were "mother's return to work" followed by "insufficient milk" (22%, 31.6%) respectively (Figure 3).

The majority of both groups were knowledgeable regarding advantages, time of initiation and nutrition of mothers with a highly statistically significant difference. As regards to the preparation of breast, the results revealed that the lowest percent of satisfactory knowledge among Egyptian and Saudi women were "BF demand" (25.7%, 20.1%) and "misconception" (33%, 22.8%) respectively. Also it was found that the mean score of total knowledge among Egyptian and Saudi women was 14.73±1.94 and 11.93±4.88 respectively with highly significant difference (P<0.000) (Table 3)..Table (4) showed that the highest percent of Egyptian and Saudi women had high level attitude toward BF practice (73.3%, 62.4%) respectively and (26.7%, 36.2%) had moderate level attitude toward BF practice. Also it showed that mean score of total attitude among Egyptian and Saudi women was 3.68±0.3 and 3.57±0.5 respectively with statistically significant difference.(P<0.000).

Table (1): Number & percent distribution of women according to their socio-demographic data

Parameters	Egyptian		Saudi	
	No	%	No	%
Age (years)				
< 25	0	0	4	2.7
25-34	27	14.1	88	59.1
35- 44	143	74.9	41	27.5
≥ 45	21	11	16	10.7
Mean and standard deviation of age	38.84±4.52		34.01±6.51	
Education				
Read and write	2	1	5	3.4
Secondary	88	46.1	57	38.3
Higher	101	52.9	87	58.4
Occupation				
Housewife	39	20.4	27	18.4
Employed	152	79.6	120	81.6
Income				
Sufficient	175	91.6	126	84.6
Insufficient	16	8.4	23	15.4
Child numbers				
1-2	93	48.7	81	54.4
3-4	92	48.2	42	28.2
≥ 5	6	3.1	26	17.4

Table (2): Number & percent distribution of mothers according to their practice of breast feeding

Parameters	Egyptian		Saudi		
	No=191	**%**	**No=149**	**%**	P value
Practice of Breast Feeding (BF)					
Yes	177	92.7	133	89.3	0.2
No	14	7.3	16	10.7	NS
Duration of BF(177-133)					
< 6 months	4	2.3	62	46.6	
6-	15	8.5	28	21.1	0.000
12-	38	21.5	16	12	
≥ 18	120	67.8	27	20.3	
Mean and SD of BF duration	17.51±7.74		8.11±7.25		0.000
Exclusive BF for 6 months (177-133)					
Yes	132	74.6	55	41.4	0.000
No	45	25.4	78	58.6	
***Types of feeding**					
Artificial	40	22.6	56	42.1	0.000
Herbs and Water	5	2.8	21	15.8	0.000
Nutrition	14	7.9	27	20.3	0.003
Cessation of breastfeeding before 2 yrs (177-133)					
Yes	85	48	92	69.2	
No	92	52	41	30.8	0.000

*items not mutually exclusive

Table (3): Number & percent distribution of mothers according to their satisfactory knowledge regarding breast feeding practice

Parameters	Egyptian		Saudi		*P* value
	No	%	No	%	
Advantage	191	100	128	85.9	0.000
Time of initiation	191	100	124	83.2	0.000
Preparation of breast					
During pregnancy	114	59.7	51	34.2	0.000
Before feeding	157	82.2	100	67.1	0.001
Duration of exclusive BF	87	45.5	77	51.5	0.2
BF demand	49	25.7	30	20.1	0.2
Nutrition of mother	189	99	130	87.2	0.000
Misconception	63	33	34	22.8	0.03
Mean score of total knowledge	14.73±1.94		11.93±4.88		0.000

Table (4): Number & percent distribution of women according to their level of attitude regarding breast feeding practice

Parameters	Egyptian		Saudi		*P* value
	No	%	No	%	
Low level attitude	0.0	0.0	2	1.3	
Moderate level attitude	51	26.7	54	36.2	
High level attitude	140	73.3	93	62.4	
Mean score of total attitude	3.68±0.3		3.57±0.5		0.01 S

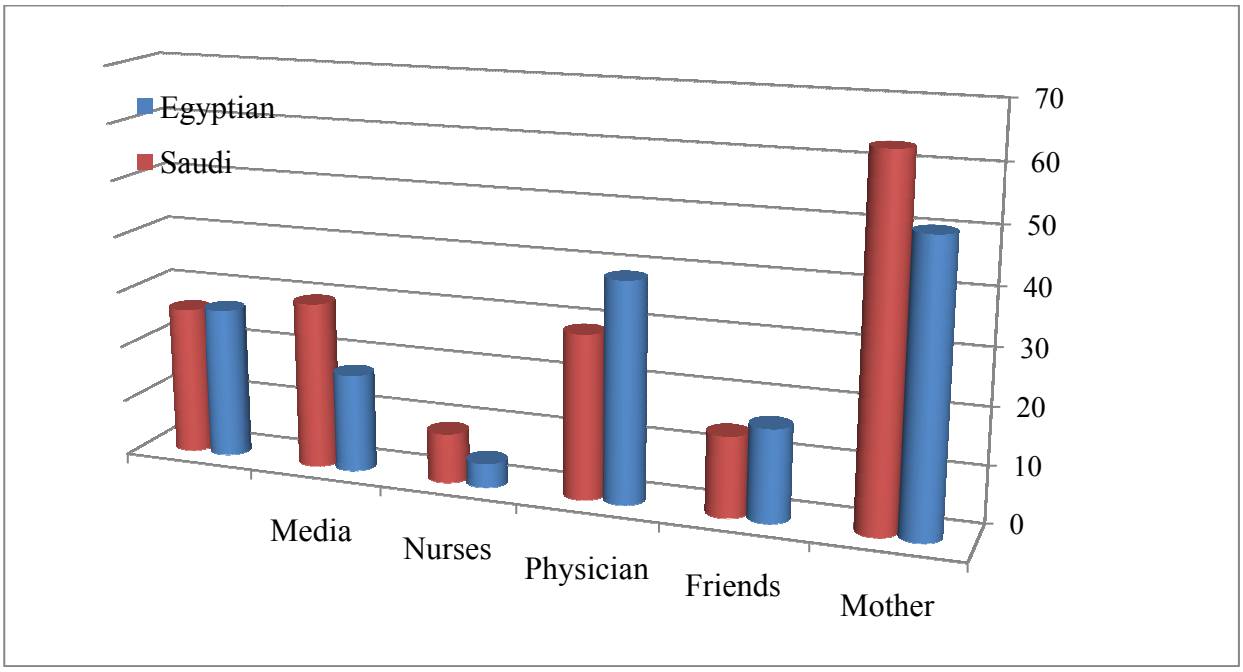

Figure (1): Source of information about breast feeding among Egyptian and Saudi mothers

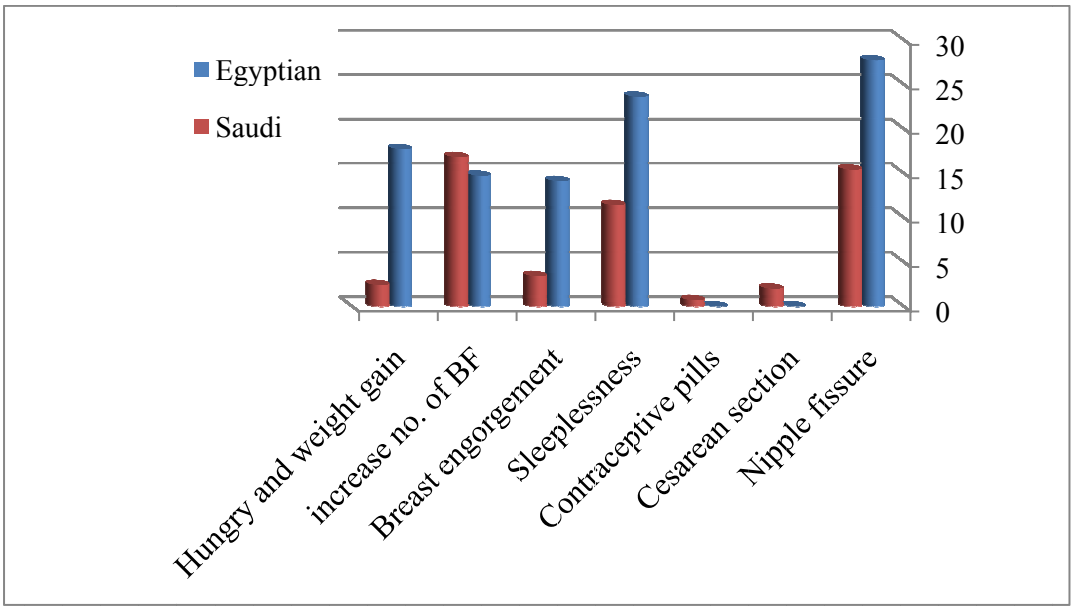

Figure (2) Problems and obstacles in BF among Egyptian and Saudi mothers

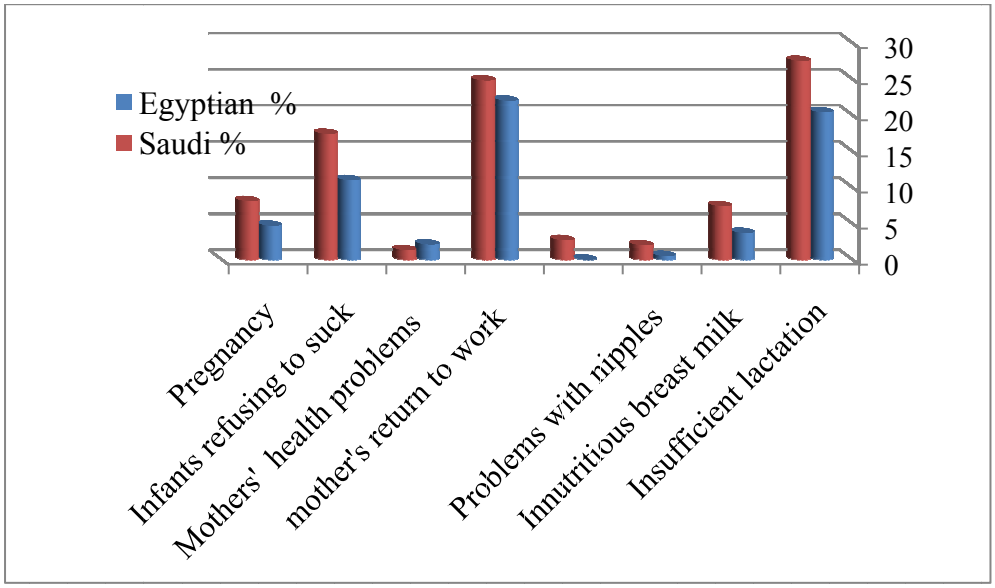

Figure (3) Reasons given for breast-feeding cessation before 2 years among Egyptian and Saudi mothers

4. Discussion

Encouraging women to breast feed presents a major challenge to health care professionals. Despite attempts to increase the number of women choosing to breast feed, rates of initiation and continuation in many countries remain less than optimal (Swanson and Power, 2005). In terms of demographic characteristics, the two groups were homogeneous and well matched, rendering the overall comparisons between the two groups straightforward (Table 1).

The majority of participants in this study were knowledgeable regarding the advantages of breastfeeding (85.9% & 100%), nutrition of mother (87.2% & 99%), and their knowledge was inadequate in areas of duration of exclusive BF (51.5% & 45.5%), BF demand (20.1% & 25.7%) Misconception (22.8% & 33%) for Saudi and Egyptian mothers respectively. Those findings are in agreement with the recent study which conducted in India by Ekambaram *et al.* (2010).

Despite many studies showing the benefits of breastfeeding for infants and mothers, the practice of breastfeeding, especially exclusively, is still far below the standard recommendation Adtina *et al.* (2006). In Saudi Arabia, there is a significant downward trend in

breastfeeding and upward trends in both bottle and mixed feeding rates with increasing infant's age (El-Gilany, 2010). The present findings concurred with that, however about half of the Saudi mothers (46.6%) breastfeed their infants for less than six months compared to only 2.3% of Egyptian mothers (Table 2).

In accordance with the previous studies (El-Mouzan *et al.,* 2009, Egypt Demographic and Health Survey, 2010), the breast-feeding duration was significantly longer for Egyptian mothers compared with Saudi mothers. The mean duration among Egyptian was 17.5 months while among Saudi was 8.1 months with highly statistically significant difference. This may reflect a difference in the socio-economic and cultural status.

The cross-country comparison, as expected, revealed many between-country differences which correspond to the results of previous international studies (Suhonen *et al.,* 2008 and Papastavrou *et al.,* 2012). It is possible to speculate that these differences may be attributed to organizational factors, different healthcare systems, different aspects of education and training and cultural differences (Watson *et al.,* 2003).

Exclusive breastfeeding (EBF) for the first six months of an infant's life is a cost effective intervention in saving children's lives and it is recommended by the World Health Organization (WHO, 2009). The prevalence of exclusive breastfeeding up to infant age of 6 months was 74.6 % for Egyptian mothers compared to 41.4% for Saudi mothers. Only 20.3% of Saudi mothers continued breastfeeding for equal or more than 18 months compared to 67.8% of Egyptian mothers. This difference can be attributed to many possible factors, but the foremost reason is undoubtedly the different approach of each country to breast-feeding promotion.

In present study it was seen that only 59.7 % of the Egyptian and 34.2% of Saudi mothers were knowledgeable regarding the preparation of breast required during pregnancy. Support and counseling should be available routinely during antenatal care, to inform mothers to prepare her breast during pregnancy and before feeding, which help them to initiate breastfeeding; and in the postnatal period to ensure that breastfeeding is fully established (Table 3).

As all mothers believed that breast milk was beneficial for the infant, they had a positive attitude to breast feeding. The present study showed that the most of the both groups (73.3% of Egyptian and 62.4% of Saudi mothers) had a high level of attitude toward breastfeeding (Table 4).

Examination of the reasons given for breast-feeding cessation shows that both Egyptian and Saudi mothers experience difficulties with the establishment of breast feeding, but these difficulties are far less likely to result in cessation for Egyptian mothers. For Saudi mothers, insufficient lactation (31.6%) and Mother's return to work (27.8%) accounted for most the cases of breast-feeding cessation. In Egypt, early breast-feeding cessation was due to return to work (23.7%), followed by insufficient lactation (22%). The reasons given for breast-feeding cessation by the two groups are supported by the literature (Figure 3).

Our findings are indicated that 92.7 % of Egyptian mothers and 89.3% of Saudi mothers are practice the breastfeeding for their infants after delivery to some point of time. In spite of this, 57.9 % of Saudi mothers introduce Herbs and/or artificial feeding to their babies early during the first six months compared to only 25.4% of Egyptian mothers. Those findings are in quite consistent with report of another study carried out by El-Mouzan *et al.* in 2009 in Saudi Arabia. El-Mouzan *et al.* reported high prevalence of breastfeeding initiation at birth; which indicates the willingness of Saudi mothers to breastfeed. However, early introduction of complementary feedings reduced the period of exclusive breastfeeding.

Conclusion

There is a need for upgrading knowledge for Saudi mothers regarding breastfeeding. Research in infant feeding should be a health priority to improve the rate of breastfeeding and to minimize other inappropriate practices. Most of the Egyptian and Saudi participants who ceased breastfeeding attributed this to return to work; consequently governmental policies regarding longer leave for new mothers and child care centers inside large institutions should be considered.

Ethical considerations

The study was approved by the Ethics Committee of Scientific Research (ECSR), Qassim University. Eligible Nongovernmental Organizations (NGOs) were given an information letter explaining the aims of the study assuring them of anonymity of the collected data and written approval were obtained from the director of each NGO. Written informed consent was obtained from all participants who were advised that they could withdraw from the study without having to provide justification. The confidentiality of the data and the privacy of mothers were respected at all times.

Limitations of the study

Study had some limitations. First, these findings were generated from one region of Saudi Arabia, and may not be generalisable to other region or cities. Second, some obstacles faced the researchers during carrying out the study; the most obvious was the dropouts of 55 mothers from the study sample, where they were excluded due to incomplete data and refused to participate in the study.

Declaration of Conflicting Interests

The authors declared no potential conflicts of interest with respect to the research, authorship, and/or publication of this article.

Funding

The authors received no financial support for the research, authorship, and/or publication of this article.

Corresponding author
Fathia A. Mersal[1]
Department of Community Health Nursing. Faculty of Nursing, Ain Shams University, Egypt
khomarkh@yahoo.com

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5/22/2012