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Original Research Article

" Satisfaction of Iraqi Women Regarding Childhood Immunization Services Applied at Primary Health Care Centers in Baghdad"

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ABSTRACT

Background: Immunization has been shown to be the most successful and cost-effective public health intervention in the 20th century. In the developing world, it prevents about three million child deaths annually, satisfaction of the care giver with the level of this health service may increase engagement in the health care process. Objectives: to Determine Iraqi women satisfaction regarding immunization program, and to show if there is any relation between the satisfaction and certain demographic variables. Methods: a cross sectional study that was conducted for 6 months at 6 primary health care centers in Baghdad, using a self-administered questionnaire. statistical analysis: Chi-square test was applied looking for association with variables ,P value = 0.05 considered significant Result:540 participants involved in the study with mean age= 25.79 years & standard deviation =(± 6.232) ,30.3 % of the participants were with higher studies , on the other hand40.4 % of them were illiterate , .Most of the participants had either 1(31.9%)or 2 children (44.3%), about 50.1% scored good ,29.9% fair and 20% scored as poor satisfaction Conclusion: half of the participants showed good satisfaction. Significant association was noticed between the level of satisfaction of the participants with certain demographic data like age, level of educating, number of children.

Keywords: Immunization, Satisfaction , primary health care centers (PHCs)

INTRODUCTION

Childhood immunization considered to be among the most effective preventive services, and is therefore critical to monitor and evaluate. Timely immunization depends on both appropriate access to health care and the administration of eligible doses at each visit. Immunization remains one of the most important public health interventions and a cost effective strategy to reduce both the morbidity and mortality associated with infectious diseases. Over two million deaths are delayed through immunization each year worldwide. Despite this, vaccine preventable diseases remain the most common cause of childhood mortality with an estimated three million deaths each year (Hanna abbas 2014)

Uptake of vaccination services is dependent on other factors, including knowledge and attitude of mothers, density of health workers. Several studies have been conducted to find out the reasons for the non attainment of the goal of universal immunization even after more than 20 years of implementation of the Universal Immunization Programme. Most of these studies have tried to focus on the deficiencies in the beneficiaries and tried to evaluate the effect of lack of knowledge, untoward beliefs and negative attitudes towards the immunization.

Research on parental health beliefs and attitudes often assumes that parents decline immunization or are simply less knowledgeable and persistent in the health care setting without examining their access and utilization of well-child care. (Prislin R1998) (Gust DA2004) (Bennett P1992) The other side of the system, that is, the deficiencies on the provider side largely remains unaccounted for, till now. These can equally be responsible for the unimmunized status of the children due to the lack of appropriate information and above all the dissatisfaction with the services which has a bearing on the utilization of the services and consistency of the visits for receiving all the doses of the vaccines, so as to achieve a complete immunization status. In addition to promoting the appropriate utilization, a satisfied patient is more likely to develop a deeper and long-lasting relationship with their medical provider, leading to improved compliance, continuity of care, and ultimately better health care outcomes (Williams SJ 1991).

The quality of services provided in the health centers operating the BI scheme and how people perceive that quality

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would determine the level of utilization of the MCH services. In recent years developing countries, influenced heavily by findings in developed countries, have become increasingly interested in assessing the quality of their health care. Quality of care can be measured at three levels: the policy level, The service delivery level; and the client /outcome level. Outcomes have received special emphasis as a measure of quality. Assessing outcomes have merit both as an indicator of the effectiveness of different interventions and as part of a monitoring system directed to improving the quality of care as well as detecting its deterioration. Quality assessment studies usually measure one of three types of outcomes: medical outcomes, costs, and client satisfaction (B.S.C. Uzochukwu 2004)

Since the end of the conflict in Iraq in April 2003 and resumption of the functions of the health system, consisting of 1200 PHCC which supposed to provide medical services to the community, still the Maternal Mortality Rate (MMR) is 244/100.000 live births; the child Mortality rate (MR) <5 years is 131/1000 live births; and infant MR is 108/1000 live births. These figures show the impact of inadequate health services on mother and child lives, also in some part, the knowledge, attitude and practice of mothers towards the services provided may play a big role in these high figures. The direct beneficiaries would be the community at large, particularly mothers who attend the PHC center seeking ideal health services for the sake of the family. The health workers in PHC centers will get proper feedback from the outcome of this research, towards providing better health services for mothers and their children.

The indirect beneficiaries would be health policy makers at high levels in the government, general directors of preventive medicine in the Ministry of Higher Education and Scientific researches, and non-governmental organization community leaders(Thamer Kadum 2007) One indicator of health care quality, is patient satisfaction, also denominated consumer satisfaction or client satisfaction. Several studies have considered patient satisfaction as a predictor of treatment compliance, on-going use of health care services, recommending health care services to others, and a valuable feedback to evaluate health programs. At present, there is no consensus regarding what the concept of patient satisfaction encompasses. Nevertheless, an early definition of patient satisfaction in outpatient settings with nursing care defines patient satisfaction as an attitude reflecting the extent of congruence between what patients expect and their perception of the care they received(Thamer Kadum 2007).

Aim of the Study is to

1.Determine maternal satisfaction regarding immunization program health services in the Primary health center.
2.Show the relation of the satisfaction with certain demographic variables (age, number of children, level of education) of the mothers.

SUBJECTS & METHODS

Design: A cross sectional study

Duration of study: From beginning of Jan. - end of June 2012
Sample: All married females who had at least one child, attending PHC centers, with systematic random sampling (every third lady was chosen) two day per week/ the, sample size 540 mother.

Location of the study

The study was conducted at six Primary health care centers (PHCs of family medicine in Baghdad at both districts (Alkarkh, Alrusafa)

1- Al-mansor PHCC/Alkarkh
2- Hiteen PHCC / Alkarkh
3- Al-salam PHCC/Alkarkh
4- Aldubat PHCC / Arusafa
5- Bab_Almuadhem PHCC/Alrusafa
6- Al-Mustanseria PHCC/Alrusafa

SAMPLE SIZE DETERMINATION

The following assumption was used to calculate the sample size required:

$$n = (Z\alpha/2)^2 (P-(1-p)) / E^2$$

$$= (1.96)^2 (0.5)(0.5) / (0.05) = 384$$

Where n= number to sample
$Z\alpha = (1.96)^2$ for 95% confidence interval (i.e: $\alpha = 0.05$)
P= best guess for prevalence (e.g.± 0.5)
E= maximum tolerable error for the prevalence estimate (e.g. ±0.50)

Data Collection Procedure

Data were collected using a self-administered questionnaire, the questionnaire was evaluated by 3 specialists (one consultant family physician, 2 consultant community medicine specialists) and filled by direct interview using Arabic language form, all enrolled ladies agreed to participate and there was no pregnant women who refused the interview. The questionnaire: consisted of 13 question through concerning vaccine health service applied by the primary health care centers, certain demographic data like:

age: was subdivided into intervals
Educational level: illiterate, primary school, secondary, higher studies including college & post graduate studies
No. of children: (1,2,3, ≥ 4)

Pilot study

The study tool was pretested on a 5% of the sample (27 pregnant women) who were excluded from the study sample to assess the reliability and applicability of the tool. to show:
1- time needed to fulfil the questionnaire
2- test the difficulty of questions if present

Statistical Analysis

Data were introduced into personal computers and SPSS(Statistical Package for the Social Sciences), Version .20 was used for statistical analysis. Satisfaction level was divided into good, fair and bad for each question.
By using a scoring system for the participant's answer were:
- 0-19 = poor
- 20-30 = fair
- 31-39 = good

The Chi-square test was applied looking for significance of difference and level of association between age, educational level, and number of children regarding level of satisfaction of participants, 0.05 was considered as cut off point for level of significance. Descriptive data (No, percentages) were presented as figures.

Ethical Considerations

- The research had the approval of the scientific committee of al- kindy college of medicine / university of Baghdad
- The research had the approval of the public health directorate at the ministry of health / Iraq
- Oral consent was obtained from the participants. All pregnant women were informed about their right to participate or refuse this interview, in fact in the field of the study
- To minimize bias, interviews were conducted in an area with adequate confidentiality and privacy and without any involvement of health care providers.

RESULTS

The research was conducted at six primary health care centers ,with 540 Iraqi women as participants, with mean age = 25.79 years & standard deviation= (SD ± 6.232) were the highest percent of age interval (26.9%) was at 26-35 years as shown in figure (1) 30.3 % of the participants were with higher studies, on the other hand40.4 % of them were illiterate, as shown in (figure 3). Most of the participants had either 1(31.9%)or 2 children (44.3%) as shown in figure (4) Half of the participants scored good satisfaction with the immunization services applied at the 6 primary health care centers that were involved in the research, while third the participant find it fair services, and 20% scored poor satisfaction, as shown in figure (4) There was a significant association between age of participants and their satisfaction regarding the immunization services, the older the lady was the lesser satisfied she was, where p value = 0.05 ,this is clearly shown in table (1)

A significant association was observed between the level of education of participants & their satisfaction regarding the applied immunization, health services, the higher the education level of participants was the lesser their satisfaction was, as shown in table (2) Similarly, the higher the number of children of participants was the lesser their satisfaction, a significant association that was clearly seen in table (3).

DISCUSSION

Satisfaction of the Participants Regarding Immunization, Health Services

In the current study half of the participants had good satisfaction regarding this service, in a similar study done in India the overall satisfaction was 90% (Bhola Nath 2009).Other study done in the united states of America The majority of parents were satisfied with their child's health care including vaccine service. Two thirds of mothers reported their infant's health care as excellent, 27% as good, and only 4% as fair or poor; only 4% rated overall care as fair or poor. The negative effect of fair/poor satisfaction on immunization was largely explained by reduced utilization of age-appropriate well-child care. (Ashley H et al. 2007)

Parental satisfaction with pediatric care is an indicator of provider quality that has been relatively unexplored in relation to childhood immunization. One prior study reported an association between parental satisfaction with pediatric care and up-to-date immunization at 24 months independent of maternal age, race, and education (Bates AS 1998)but did not establish a temporal ordering. It is also not clear whether the potential relationship between parental satisfaction and children's immunization is the result of greater age-appropriate well-child care utilization or of some combination of parental and health care provider vigilance. In addition to promoting the appropriate utilization, satisfaction may increase engagement in the health care process. Research on parental health beliefs and attitudes often assumes that parents decline immunization or are simply less knowledgeable and persistent in the health care setting without also examining their access and timely utilization of well-child care (Prislin R 1998) (Gust DA et al 2004) (Bennett, Smith 1992)

The relation between satisfaction & age of participants

The current study showed that, the older the lady was the lesser satisfied she was with the immunization, health services in a significant relationship, this is in contrast with the US study were Mothers who reported less satisfaction with their infant's health care were younger, unmarried, less educated, nonwhite, uninsured or Medicaid-insured, first time mothers, had lower incomes, and had reported their infant's health status as fair/poor (Ashley H et al 2007)

The significance of these findings is tempered by the small percentage of parents who were dissatisfied with their child's care. Although the high level of satisfaction with children's health care is consistent with other research (Halfon N 2004) (Homer et al 1992) (Zhan 2002) (Weech-Maldonado et al 2001) the Healthy Steps sites may not be representative of all pediatric practices. The level of dissatisfaction varied considerably among the sites, ranging from 2% to 8%, suggesting that the relevance of quality improvement initiatives and/or targeting dissatisfied parents may be site specific. Broader efforts to improve parent satisfaction may also enhance compliance with medical regimens43 and reduce the risk of malpractice litigation in addition to improving preventive services utilization (Hickson GB1992) (Penchansky , Macnee 1994)

The relation between satisfaction & level of education of participants

The current study showed that the higher the educational level of the participants was the less they were satisfied, this may be because that highly educated participants have higher expectation on the quality of immunization services that applied at the primary health care centers compared to less educated ones.

The Relation Between Satisfaction of the Participants & Number of Children

In this study there was a significant association between the number of children of participants and their satisfaction regarding the immunization services applied at the primary health care centers , on contrast to the study that was performed in India where there was no association between satisfaction of clients and any of the demographic data (Ashley H et al 2007).

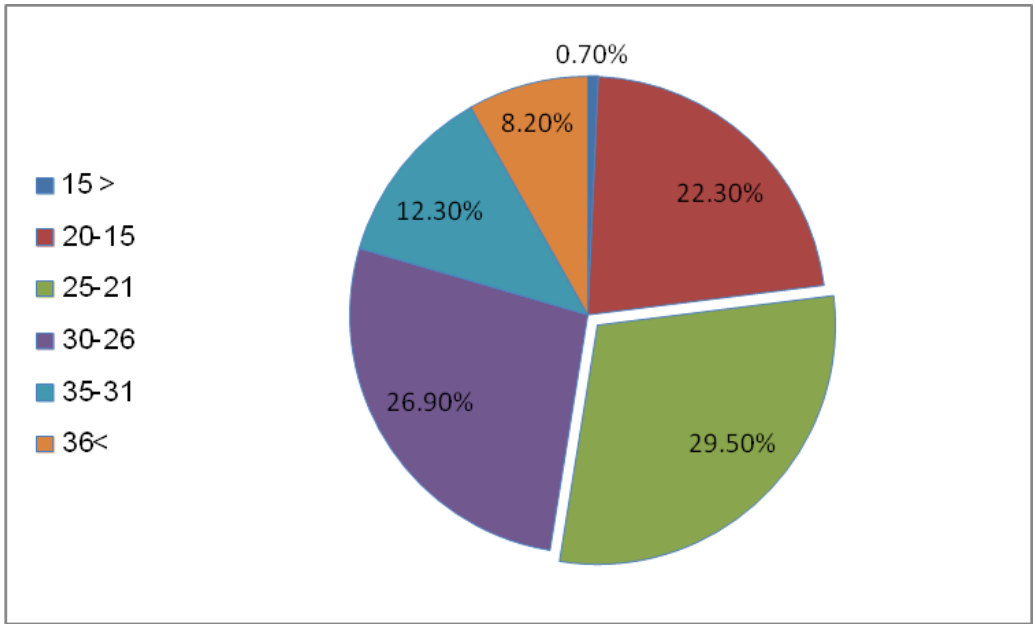

Fig 1: distribution of the sample by age

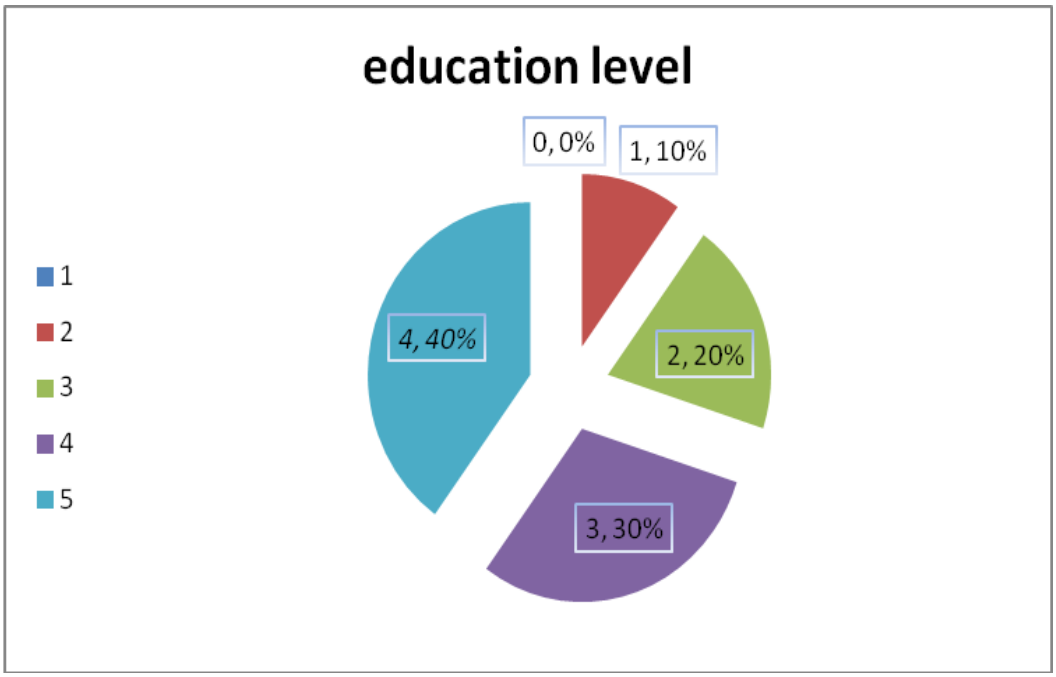

Fig 2: distribution of the sample by educational level
(1= illiterate, 2= primary school, 3= secondary school, 4=higher studies : college & higher studies)

CONCLUSION

The current study showed different levellevels of satisfaction of the participants regarding immunization services applied at primary health care centers, werewhere half of the participants showed good satisfaction. Significant association was noticed between the level of satisfaction of the participants with certain demographic data like age, level of educating, number of children

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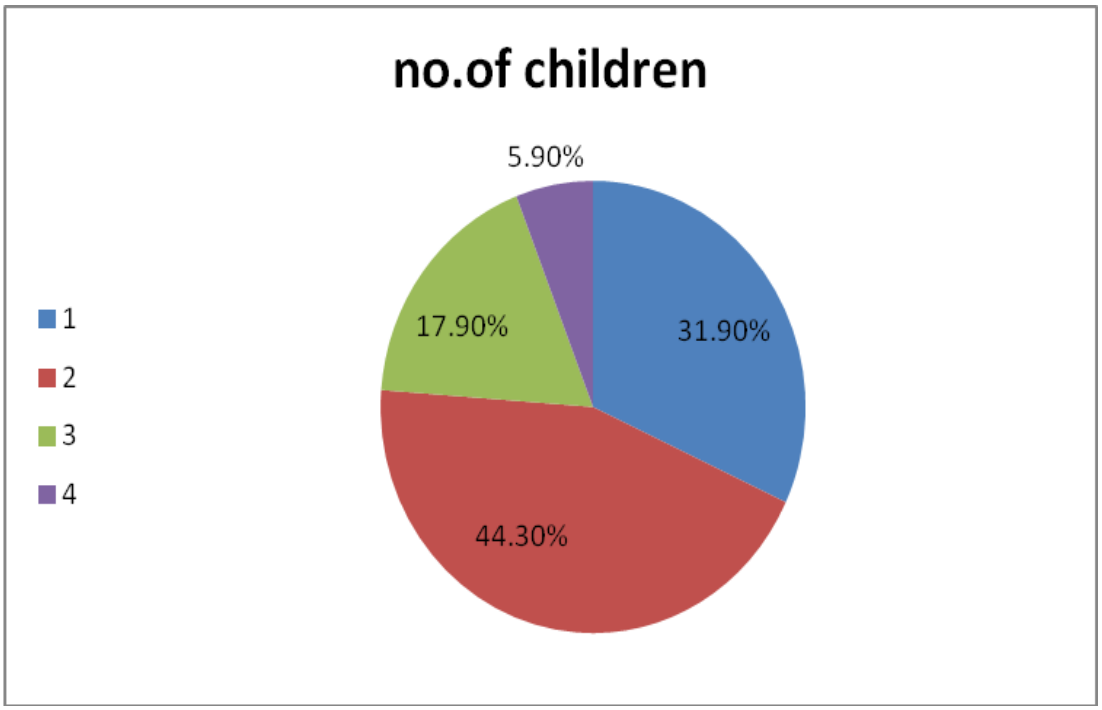

Fig 3: distribution of the sample by number of children

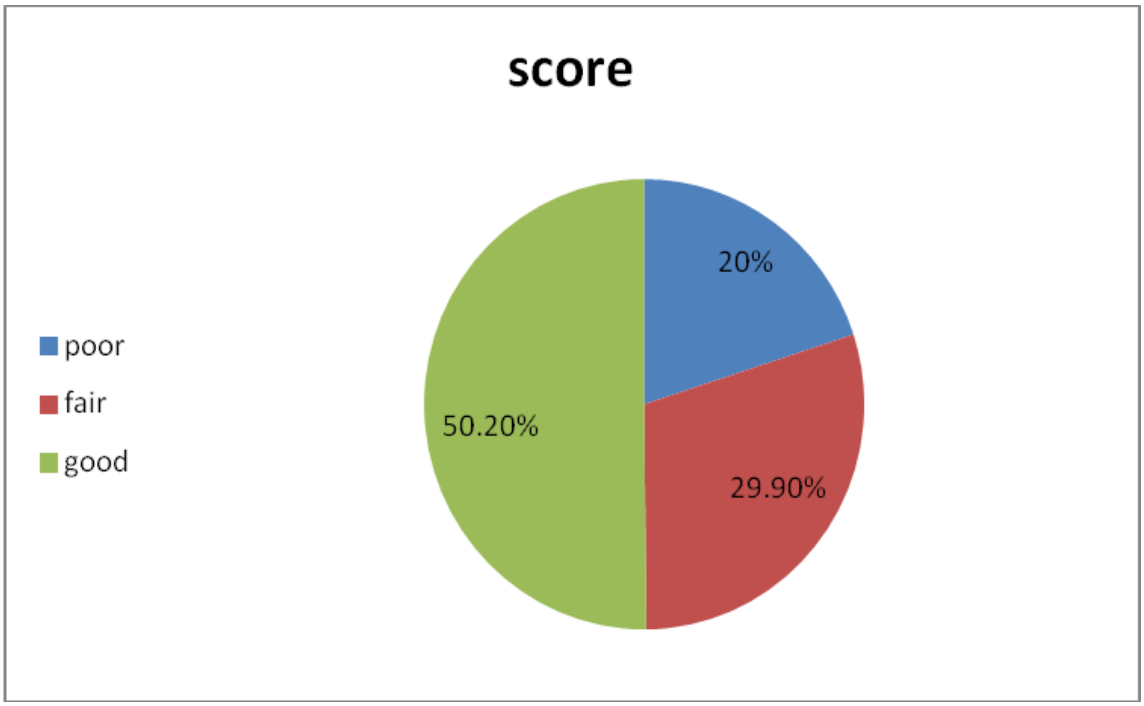

Fig (4): satisfaction of Iraqi women regarding vaccine program

Table (1): Association between satisfaction of participants & age

Age	Level of satisfaction			P-value
	Poor	Fair	Good	
<15	1	0	3	0.05*
16-20	26	30	66	
21-25	37	45	79	
26-30	27	69	51	
31-35	13	9	45	
>36	5	10	30	
Total	109	163	274	

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