

# Role of Bottle Feeding and Parental Education in Children Diarrhea

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## Abstract

*Diarrhea can be described as the passing of loose or liquid stools. Lack of parental education and proper handling of bottle feeding among infants two year of age was associated with diarrheal disease and no breastfeeding among children 6-24 months of age are associated with increased diarrheal disease. Data for the descriptive study of diarrhea in children up to 2 years was collected during the 4 months period at the Bolan medical complex Hospital and Provincial Sandeman hospital Quetta and 100 samples were taken as diarrhea affected. A questionnaire was designed for the collection of information on the potential risk factors for the diarrhea and data was analyzed statistically by using Microsoft excel. The results against diarrhea shows that most of parents of the patients were uneducated i.e. about 62% were uneducated which shows a relationship between diarrhea and parental education. Bottle feeding was also a major cause of diarrheal disease in infants up to two years of age about 71% of patients were taking bottle feed. Our findings support that bottle feeding and parental education were two major factors for the diarrhea illnesses in children up to two years of age.*

**Key words:** parental education, diarrhea, Bottle feeding.

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## INTRODUCTION

Diarrhea can be described as the passing of loose or liquid stools. It is generally defined as three or more loose or watery stools within a 24-hour period (Wardlaw et al., 2006) or a decrease in the consistency of the stool from that which is normal for the patient (WHO, 2005). In the intestinal tract, the movement of fluids is guided principally by the active secretion of chloride ions across the epithelium. Absorption of fluids from the lumen is driven, for the most part, by the uptake of sodium in combination with digested nutrients when present, or coupled with chloride when fasting. Diarrhea occurs when the absorption and secretion of ions and solute across the intestinal epithelium is disrupted, such that water moves into the lumen in an attempt to restore the appropriate ion concentrations. The vast surface area of the intestinal epithelium can allow rapid and grave changes to the concentration of circulating electrolytes (Barrett, 2008). ORS may be given at home

to a child who is mildly dehydrated, refusing to eat a normal diet, or has vomiting and/or diarrhea. If needed, ORS can be given in frequent, small amounts by spoon, bottle, or cup over three to four hours. WHO and UNICEF revised their recommendations for the management of diarrhea, including zinc supplementation as an adjunct therapy to oral rehydration. Since then, the recommendations have been adopted by more than 40 countries throughout the world. In countries where both the new ORS and zinc have been introduced, the rate of ORS usage has dramatically increased. (WGO, 2008) Breast milk contains the nutrients, antioxidants, hormones and antibodies needed by a child to survive and develop. Infants who are exclusively breastfed for the first six months of life and continue to be breastfed until two years of age and beyond develop fewer infections and have less severe illnesses (Feachem et al., 1987) Infants who are not breastfed have a six fold greater risk of dying from infectious diseases

in the first two months of life, including from diarrhea, than those who are breastfed. (WHO, 2000)

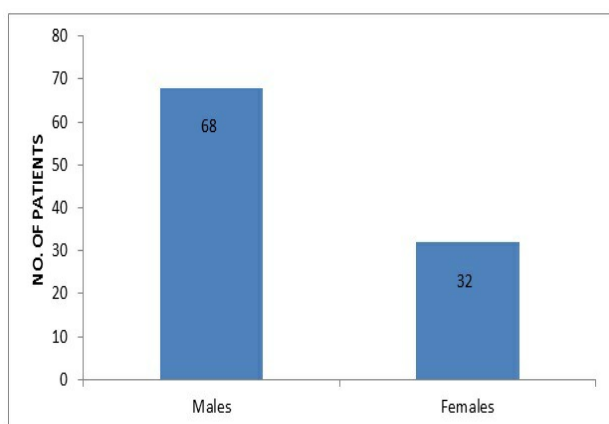
## MATERIALS AND METHODS

### Data collection:

Data for the descriptive study of diarrhea in children up to 2 years was collected during the 4 months period at the Bolan medical complex Hospital and Provincial Sandeman hospital Quetta. This study analyzed 100 patients diagnosed as diarrhea affected patients. A questionnaire was designed for the collection of information on the potential risk factors for the diarrhea. The factors were selected on the basis of the patient daily life routine for feeding and proper handling of children up to two years of age. The gender of patients visited was noted. All patients were grouped into different age groups. The questions were asked regarding their socioeconomic status and ethnic groups. Further questions were asked regarding bottle feeding to children, parents education etc. The no: of diarrhea/day in children was also noted and parents were asked about any treatment given to children prior doctor's visit. The data was analyzed statistically by using Microsoft excel.

## RESULTS

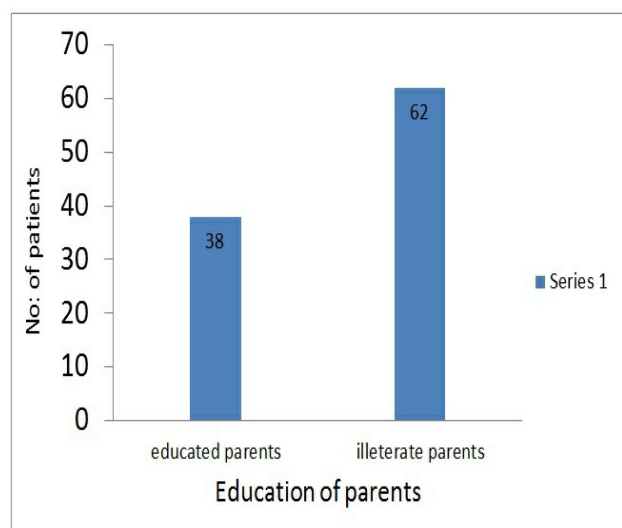
The graph 1 shows the gender distribution of patients suffering from diarrhea. Among 100 patients 68 patients were male whereas 32 were seen female.



**Graph 1:** The graph shows the No: of patients included in this study, with 68 males and 32 females.

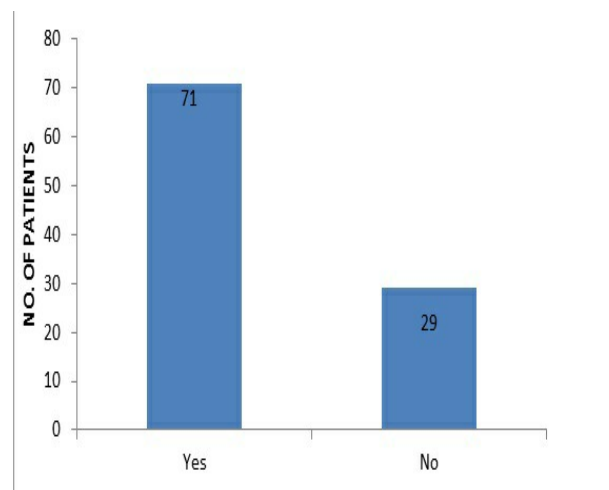
Graph 2 represents the education of parents of diarrheal patients. Only 38 parents in 100

were found educated. The rest 62 parents were illiterate.



**Graph 2:** The graph shows education in parents of diarrheal patients. Out of 100 patients only 38 parents were educated whereas parents of 62 patients were illiterate.

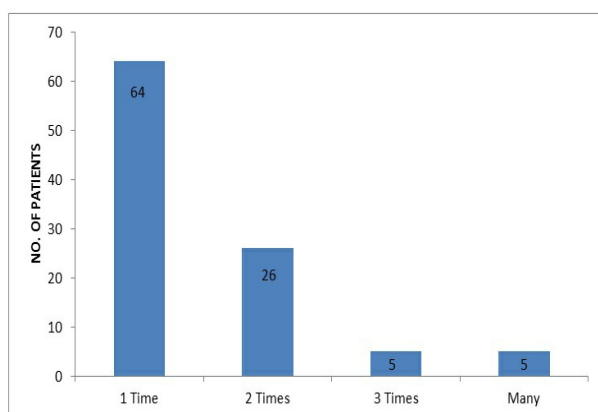
Graph 3 represents Bottle feeding plays an important role in causing diarrhea. Out of 100 patients 71 patients were taking bottle feed regularly, which shows its contribution in causing diarrhea in children.



**Graph 3:** The graph shows out of 100 patients 71 patients were taking bottle feed regularly.

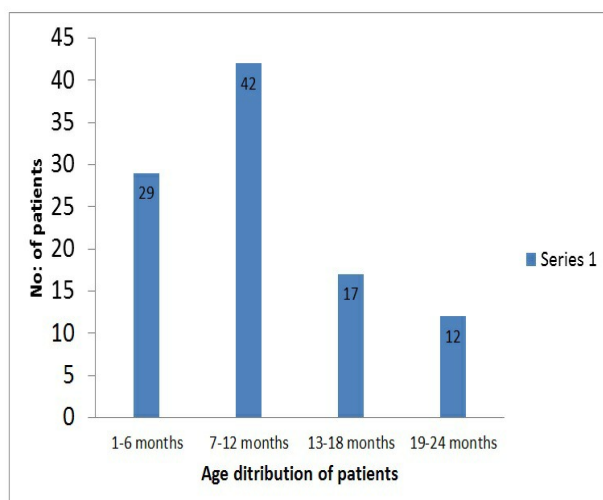
Graph 4 represents the severity of diarrhea by No: of times a child suffered from diarrhea disease in a month. In 5 patients it was severe because they were having diarrhea multiple times a month. A total of 5 patients were having 3 times/month, 26 were having two times/month, whereas 64 patients were

reported having a single attack of disease in a month.



**Graph 4:** shows the no. of times diarrhea/month.

The graph 5 shows a data related to age of patients. The minimum age recorded was 1 month and maximum age was 24 months. The patients were divided into 4 groups. The patients in age group 1-4 months were 29. The patients in second group were 42 ranging an age of 7-12 months. A total of 17 in 100 patients were from age group of 13-18 months whereas 12 patients were between 19-24 months of age.



**Graph 5:** It represents no: of patients affected on the basis of age group.

## DISCUSSION

The results show that most of the patients were taking bottle feed after 6 month of their age which shows high rate of diarrhea disease in age group of 7-12 months. So bottle feeding is one of the major causes of diarrhea illnesses in children. Infants who are exclusively breast fed for the first six months of life and continue to be breast fed

until two years of age and beyond develop fewer infections and have less severe illnesses (Feachem et al., 1987) so the uptake of bottle feeding is supporting the spread of disease than in infants having mother feed. Education of parents regarding to the diarrhea is also one of the causes of the increase in the diarrhea disease. Results shows that most of the parents were uneducated that is they have no primary education and have no idea that how to take care and keep cleanliness in their feed their children to avoid such type of diseases. An educational workshop was developed to train parents and child care professionals on how to properly manage young children with diarrhea and reduce the risk of diarrhea spread at home and in early childhood settings. (Scott et al., 2010). Most of the parents were not taking any precautions at their home to prevent their children from diarrhea due to lack of parental education. Due to this diarrhea become more common in children up to two years of age. Many of the risk factors for contracting diarrhea illnesses are associated with poor socioeconomic conditions, such as lacking access to safe water and sanitation, poor hygiene practices and unsafe human waste disposal (Daniels et al., 1990). Children in households with lower socioeconomic status receive oral re-hydration therapy (fluids taken by mouth to prevent or treat dehydration) less often than children in households with higher socioeconomic status. (Forsberg et al., 2009) Most of the patients were found having first time diarrhea during research and the reason for that was unhygienic environment and no proper handling of feeding. Diarrhea diseases are major causes of morbidity, with attack rates ranging from two to 12 or more illnesses per person per year in developed and developing countries. In addition, diarrhea illnesses account for an estimated 12,600 deaths each day in children in Asia, Africa, and Latin America (Guerrant et al., 2008), so the unhygienic conditions and poor environment and unsafe drinking water will lead to the cause of diarrhea and education of parents and bottle feeding were found deeply related with the disease.

## CONCLUSION

Lack of education of parents play a vital role in occurrence of diarrhea in children and Bottle feeding enhances the chance of diarrhea in children in early period of life which must be reduced.

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