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# Effectiveness of Health Education on Knowledge among Mothers regarding Protein Malnutrition in under Five year Age Group Children in Rural Community

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**Abstract**

***Background:*** *Protein malnutrition commonly seen in 2 to 5 years of age group in many under developed countries. This could be due to lack of awareness about nutritive value of foods, faulty feeding practices, ignorance plays a major role in the development of Protein malnutrition in early ages of life. This leads to hampering of physical and mental development of the child.*

***Objective:*** *The objective of this study is to assess the "effectiveness of health education on knowledge among mothers regarding protein energy malnutrition in under-five year age group children in rural community"*

***Methodology:*** *Quasi experimental study is used to assess the "Effectiveness of teaching program among mothers on knowledge regarding protein energy malnutrition in under five year children. The*

*sample size of mothers is 70 in resident of Ali Raza Abad. The convenient sampling technique is used for data collection.*

***Results:*** *The results of the study showed that there is significance of Effective teaching program among mothers on knowledge regarding protein energy malnutrition in under five year children. The mean before interventions is (6.99) and standard deviation is (1.210) while the mean after the interventions is (14.91) and the standard deviation is (2.289). This educational intervention is highly effective because the significance (P-Value is 0.00)*

***Conclusion:*** *The study findings revealed that health education on protein energy malnutrition is effective in improving the knowledge of mothers under five year.*

**Key words:** Protein Malnutrition, Knowledge, Health Education, Effectiveness, Rural Community, Under Five Children.

## INTRODUCTION

Protein Energy Malnutrition is the most common issue in many developing countries. However, it causes the morbidity and motility among most of young children in rural communities (Musa, T. H., 2014).

There are many factors which cause the malnutrition in young children. A Child depends upon complex interaction of numerous factors like: the environmental factors, cultural factors, socio-demographic factors, reproductive factors, political and the regional factors (Asfaw et al., 2015).

The stunting is associated with the deprived knowledge of mothers about protein energy malnutrition. It can cause the memory impairment in children, reduce learning, decrease cognitive abilities, and reduce level of school enrollment of the children. The overall result in rural communities are the low adult wages and loss of their productivity (Fikadu, T., Assegid, S., &Dube, L. 2014).

In these days the life style and the nutritional pattern are changed. These changing of life style habits and the change in nutritional status level have been changed in community's health

habits in many countries. As we know that malnutrition is the major nutritional issue among the children below five years in the country of Iran (Kavosi, 2014).

Childs nutrition stated that linear growth retardation in children is also associated with reduce child mental abilities and their educational attainments also have been reduce caused by the protein energy malnutrition among under five. It could be associated with the poor development in the next generations of the child's (Walker, 2015).

Protein energy malnutrition commonly seen in 2 to 5 years of age group in many under developed countries. This could be due to lack of awareness about nutritive value of foods, faulty feeding practices, ignorance plays a major role in the development of Protein malnutrition in early ages of life. This leads to hampering of physical and mental development of the child (Imran, 2012).

Studies between 1957-2014 shows that the immune parameters are responsible for protein energy malnourished in children of age 0-5 year. While several years ago the immunological studies focus on the malnourished children who were effected with co-infections if the severely malnourished children were hospitalized (Bourke, 2016).

## AIMS OF THE STUDY

The aim of the study is to assess the effectiveness of health education on knowledge among mothers regarding protein energy malnutrition in under-five year age group children in rural community.

## SIGNIFICANCE OF THE STUDY

This study is significant to minimize the protein energy malnutrition among under five year children in rural community. The teaching session is conducted to enhance the knowledge among mothers of under five year children about protein energy malnutrition and the problems faced due to malnutrition. After gaining the knowledge about protein energy malnutrition the behaviors of the mothers was changed. So, the health practices of the mothers were also improved.

Furthermore, the improved practices of the mothers were led towards promotion of healthy life and also minimize the malnourished child's in future.

This study was also be of great significance to the community nurses because by using study intervention community nurses and health workers can teach community people about protein energy malnutrition in children.

This study was also helpful for researcher to evaluate the effectiveness of health education sessions in rural community.

## LITERATURE SEARCH

Protein energy malnutrition is the major health problems in young children. While the severe acute malnutrition in which kwashiorkor & marasmus is the serious cause of death in many low income or middle income countries. At least 10% of all deaths among young children under five years of age worldwide (Trehan, 2015).

The risk factors contributing to malnutrition were poor socioeconomic status, parental illiteracy, overcrowding, lack of immunization, lack of awareness among caregivers regarding appropriate child feeding practices (Goyal, 2015).

The economic status of the families and the education level of mothers were associated with the child health. The poor family income source in many household are associated with child poor nutritional status and may cause severe malnutrition in many young children (Demissie, 2013).

The protein energy malnutrition among the under-five child affected by the deviation from normal nutritional status by socio-demographic variables in that rural communities such as Ambala, Haryana, According to the Gomez classification, 44.43% had good nutritional status with the proportion of first, second and third degree malnutrition was 39.34%, 15.66% and 0.66%, respectively. A significant association of protein energy malnutrition was determined by the age of the children (Singh, 2012).

The Asia recommendation study shows that the protein requirements are necessary in all age groups. So, that the prevalence rate of the undernutritional children who were breast fed is lower

than that children who were not breast fed over the time required for them. The slightly lower level (14.7 % and 13.7 %) comparison of both who were breast fed or who were not breast fed (Alzaheb, 2015).

The malnutrition is eradicated from the world is by using of fruits and vegetables in diets. So, there is a need of the production of the fruits and the vegetables and their security is also needed (Ahmad, 2011).

The protein energy malnutrition was present in below five as compares to adults. Furthermore, the prevalence rate of the severely effected child by protein energy malnutrition was 70% among the 13 to 60 months of the age. While mild and the moderate was about 24% who were malnourished in 2-5 years of age (Imran, 2012).

There were 45.5%, 38.7% & 15.7% of the children were under development, underweight by the protein energy malnutrition caused by the food providing by the house hold at the age of birth. The study also shows that the children age were not associated with the underweight of that child (Ozor, 2014).

The study estimated that the prevalence rate of muscles wasting, stunting in children under five years of age was associated with these three indications. The age & sex of the child is about 36%. Although the diarrhea was about 31% and the fever was about 21%. The results shows that the use of high vegetation was also associated with the reduction of malnutrition and to reduce the stunting, muscle wasting and reduce the low mid-upper arm circumference in malnourished children (Kinyoki, 2015).

The parasitic infections present in malnourished children. The deficiency of micronutrients was also present by the chronic inflammation or the loss of many nutrients throughout the body. The growth of the children were inhibited due to increase infestation. There are about 48.6% infested children while 28.8% who were not infested child. The Egyptian study also shows that the results of the anemia in the infested childs was about 52.4% while 32.7% of non infested children (Hegazy, 2014).

There are 33.30% who were malnourished and had poor appearance 41.66% other were diffused pigmented about 25%. They had pale conjunctiva 23.33%, lack of luster about 16.66% and cheilosis were about 19.16%. There were certain foods like: pulses, fats, oils,

green leafy vegetables and many other vegetables. While the energy proteins, riboflavin, niacin & calcium are necessary healthy diet for the undernutritional children. The milk products were also help full for the proper nutritional diet. The children nutritional status were associated with the education of the mother in many communities. The study also shows that there are 98% mothers had the poor knowledge about the protein nutritional diets. After attending educational session the knowledge of mothers becomes hight about 82%. So, that the educational programs were beneficial for the un educated mothers in rural communities for the knowledge development for adequate diet of the children (Gupta, 2015).

## METHODS

### STUDY DESIGN

Quasi-experimental study design was used in this research.

### SETTING

The setting for this research was the houses that have the mothers of child less than 5 years of community of Ali Raza Abad.

### POPULATION

The target population for this research includes mothers of under- five year old children of Ali Raza Abad community.

### SAMPLING

Purposive Sampling technique was used in this research study. This sample technique was being effective.

### STUDY TIMELINE

This study was approximately 4 months (from September 2018 to December2018).

### RESEARCH INSTRUMENT

The main instrument for Information was questionnaire adopted from the previous research. The questionnaires were divided into two sections. Section 1 comprised of demographic information of respondents. While, Section two variables of the study this questionnaire and question about the knowledge regarding protein malnutrition.

## DATA GATHERING PROCEDURE

The adopted questionnaire was used to collect the data from the mothers of below five children. The data will give us the baseline information both demographic data and the knowledge about protein energy malnutrition. These questionnaires were collected in the form of pre-data and post data collection from mothers has under five year children who were participated in the research. The data was collected by inviting the mothers in small teaching program arranged in the community open place. In which 15-20 mothers age between 20-35 years and willing to participate in this study are meet the inclusion criteria of the study has came to participate easily in that teaching session which would take 25-30 minutes.

## ETHICAL CONSIDERATION

The rules and regulations set by the ethical committee of Lahore School of Nursing was be followed while conducting the research and the rights of the research participants is respected.

- Written informed consent attached was taken from all the participants.
- All information and data collection was kept confidential.
- Participants remain anonymous throughout the study.
- The subjects were being informed that there are no disadvantages or risk on the procedure of the study.
- They were also being informed that they will be free to withdraw at any time during the process of the study.
- Data was kept in under key and lock while keeping keys in hand. In laptop it will be kept under password.

## RESULTS

This section presents the outcomes of the study.

## PROFILE OF THE RESPONDENTS

Respondents were taken from community of Lahore Pakistan.

**Research Objective** –To assess the effectiveness of health education on knowledge among mothers regarding protein energy malnutrition in under five year age group children in rural community.

**Paired Samples Statistics**

| | | Mean | N | Std. Deviation | Std. Error Mean |
|---|---|---|---|---|---|
| Pair 1 | Pre | 6.99 | 70 | 1.210 | .145 |
| | Post | 14.91 | 70 | 2.289 | .274 |

**Paired Samples Test**

| | | Paired Differences | | | | |
|---|---|---|---|---|---|---|
| | | Mean | Std. Deviation | Std. Error Mean | 95% Confidence Interval of the Difference | |
| | | | | | Lower | Upper |
| Pair 1 | Pre Post | -7.929 | 2.108 | .252 | -8.431 | -7.426 |

**Paired Samples Test**

| | T | Df | Sig. (2-tailed) |
|---|---|---|---|
| Pair 1 Pre – Post | -31.467 | 69 | .000 |

The mean difference of pre and post- interventions is (-7929) standard deviation is (2.108) and standard error mean (.252). The lower confidence of interval is (-8.431) and the upper confidence of interval is (-7.426). The degree of freedom is mentioned 69 in the above table. The paired sample test table shows that the results of this study are significant due to the (P value .000) So, Null rejected because of significance of the study results.

| Average Pre Mean | Average Post Mean | Average pre SD | Average post SD | Difference between means |
|---|---|---|---|---|
| 6.99 | 14.91 | 1.210 | 2.289 | -7.929 |

Average pre and post interventional mean and Standard deviation were mentioned in above table. Before interventions the knowledge score of mothers was 6.99 while post interventional knowledge was 14.91.

The average pre standard deviation of knowledge was 1.210 and post SD was 2.289. The difference between pre and post knowledge score was -7.929.

## IV. DISCUSSION

This quasi experimental study revealed that there was effect of education on diseases preventable vaccines among mothers of under five year children.

The mean of pre intervention session was (6.99) with sample size 70, standard deviation (1.210) and standard error mean (.145)
The mean of post intervention session was (14.91) with sample size 70, standard deviation (2.289) and standard error mean (.274). Mean knowledge score of pre-test and post-test indicating the effectiveness of health education "**Effectiveness of health education on knowledge among mothers regarding protein energy malnutrition in under five year age group children in rural community**"

The statistical paired t-test shows the significant result in enhancing the knowledge scores between pre-test and post-test for all the aspect under study.

The study revealed that the knowledge of mothers was improved after education session to mothers. This study results was during pre-test out of 70 samples 60% had average level of knowledge and 23.3% had good knowledge & 16.7% had poor and while in post-test 86% had good knowledge and 14% had average knowledge (Sakka, 2014).

In this study results shows that there was a benefits of the educational session conducted for mothers to enhance the knowledge of mother about protein energy malnutrition in below five year children. In pre-test the majority of mothers 47 (72.31%) had average knowledge. While in post-test 51(78.46%) had average knowledge (Bevoor, 2015).

In other study, at the end of the intervention period mean knowledge score of mothers was statistically significantly (p-value<0.001) improved. At baseline (p-value=0.42) and follow up (p-value=0.44) between pre and post interventional mean practice score of mothers was not statistically significant different. Between group mean practice score comparison come up with statistically significant (p-value<0.001) difference (Daba, 2015).

Knowledge of complementary feeding was low (14.9%) and was associated with older mothers age, being married, and higher level of education. The prevalence of timely initiation of complementary feeding (47.9%), dietary diversity (16.0%) and minimum acceptable diet for children between 6 and 9 months (16%) were low. Overall, appropriate complementary feeding practice was low (47.0%) and associated with higher level of mothers' education and occupation (Mosin, 2014).

The study results revealed that the majority of 50% of participants had moderate knowledge level regarding infant weaning 66% has low practice concerning infant weaning. This study shows that there was an association between feeding practices and occupations and the relationship between educational levels of weaning practices among mothers (Ssemukasa, 2014).

## LIMITATIONS

- The sample size was limited to 70
- The sample was limited due to small area of the community.

The practices of mothers were not assessed.

## CONCLUSION

In this study it was concluded that in the under developing countries there was a major issues of protein energy malnutrition in under five year children. In Pakistan there were 750 children, under five years of age, who were protein energy malnourished. There were 366 males and 384 females. The study result shows that there was about 271 who were mild malnourished, 105 moderate malnourished. While, there were 71 children severely malnourished. They were malnourished due to lack of breast feeding in just 6 months until 2 years of age of the child's. So, there was need to enhance the knowledge of mothers of under five year children about the protein energy malnutrition to change their behaviors and then improve the health practices of mothers. Furthermore, these improvements in health practices were moved towards the promotion of health in below five year children.

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