

A Study to Assess the Level of Knowledge Regarding Protein Energy Malnutrition among Mothers of Under Five Children at Selected Area of Guduvancherry

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Abstract

To assess the level of knowledge of protein energy malnutrition among mothers of under five children and associate the knowledge of protein energy malnutrition among mothers of under five children with their selected demographic variables. An extensive review of literature for the study was done which helped the investigator identify, select, critically analyze and report on existing information of the problem selected for the study and design the methodology tool for data collection. The research approach was quantitative and the research design adopted was descriptive research design. The researcher used convenient sampling technique and selected 30 mothers of under five children for the study. The researcher used standardized tool: the mother's knowledge of protein energy malnutrition, which consisted of 10 demographic variables and 15 questions for assessing the knowledge of protein energy malnutrition. Regarding the knowledge of protein energy malnutrition, (23.3%) mothers had inadequate knowledge, 14 (46.7%) mothers had moderate knowledge and 9 (30%) mothers had adequate knowledge. Considering the association of level of knowledge of the mothers with the demographic variables, mother's education showed significant association ($X^2=9.8$), type of family showed significant association ($X^2=3.18$). Hence the knowledge of protein energy malnutrition among mothers of under five children can be enhanced through compassion, competence, conscience, confidence, and commitment among instructors working in the clinical area.

Key words: Malnutrition • Vitamins • Minerals • Fiber • Anoxia • Hormones • Cytokines and inflammation

Introduction

Children are future of society and mothers are guardian of that future, foremost, health, safety and nutrition for the young child is written on behalf of young children everywhere. Ultimately, it is the children who benefit from having parents who understand and know how to protect and promote their safety and well-being by knowing regarding nutrition. Nutrition is the provision, to cells and organisms, of the materials necessary (in the form of food) to support life. Many common health problems can be prevented or alleviated with a healthy diet. Nutrients are organic & inorganic complexes contained in food. There are six major classes of nutrients those are mainly carbohydrates, fats, minerals, protein, vitamins, and water. These nutrient classes can be categorized as either macronutrients (needed in relatively large amounts) or micronutrients (needed in smaller quantities). The macronutrients (excluding water) provide structural material (amino acids from which proteins are built, and lipids from which cell membranes and some signalling molecules are built), energy. Vitamins, minerals, fiber, and water do not provide energy, but are required for other reasons. A third class of dietary material, fiber, is also required, for both mechanical and biochemical reasons, although the exact reasons remain unclear [1].

Mother is the one who take care of the child, it is very important that she should need to have knowledge regarding care of under-five and nutrition which they need, under-fives are "age inbetween 0-5 years of child". Healthy eating and physical activity are essential for growth and development in childhood. To help children develop healthy eating patterns from an early age, it is important that the food and eating patterns to which they are exposed - both at home and outside the home - are those which promote positive attitudes to

good nutrition. Samuel Klein says that the nutritional status of patients with protein-energy malnutrition caused by gastrointestinal tract dysfunction can often be restored to normal if adequate nutritional support can be provided by dietary manipulations, enteral tube feeding, or parental nutrition. Wasting disorders, such as cancer, acquired immunodeficiency syndrome (AIDS), and rheumatologic diseases, characterised by involuntary loss of body weight and muscle mass in the setting of a chronic illness. These patients often experience wasting because of inadequate nutrient intake related to anorexia and possibly gastrointestinal tract dysfunction and [2] metabolic abnormalities caused by alterations in regulatory hormones, cytokines and systemic inflammation. The alterations in metabolism are responsible for the greater loss of muscle tissue observed in these patients than in those with pure starvation or semistarvation. Restoration of muscle mass is unlikely with nutritional support unless the underlying inflammatory disease is corrected. Weight gain that occurs after nutritional support is started is usually caused by increases in fat mass and body water, without significant increases in muscle tissue. Patients with critical illness exhibit marked metabolic alterations, manifested by increased energy expenditure, altered endogenous glucose production and lipolytic rates, and protein and energy requirements are increased in critically ill patients. However, providing aggressive nutritional support may ameliorate but does not prevent net lean tissue losses without correction of the underlying illness or injury. Balanced diet is essential for normal activities of life. Since there is enough food available, it can be improved through proper education and awareness. Good nutrition and proper feeding programs prevent illness and disabilities. Malnutrition continues to be an underlying cause of morbidity and mortality in children under five years of age [3,4].

Children are more vulnerable to suffer from nutritional deficiencies. Certain socioeconomic, biological, environmental and behavioural factors increase the risk and need to be identified early in order to promote health and prevent disease. Nutritionally educated mothers can bring up their children in a healthier way. Improving breast feeding techniques not only provide adequate nutrition to the infant but can also decrease the frequency of gastroenteritis and respiratory infections and reduce te number of infant deaths. Colostrum should be given to the neonate as it is a source of proteins, antibodies and vitamins. Malnutrition and micronutrient deficiencies during the weaning period are reported from many developing countries. These deficiencies can be prevented by complementary feeding i.e. the addition of energy through non-human milk and semisolid or solid foods to children diet as described

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by WHO. More than 3.5 million children under five die unnecessarily each year in Asia due to the underlying cause of under nutrition, and millions more are permanently disabled by the physical and mental effects of a poor dietary intake in the earliest months of life. By the time children reach their second birthday, if undernourished, they could suffer irreversible physical and cognitive damage, impacting their future health, economic wellbeing and welfare. The consequences of insufficient nourishment continue into adulthood and are passed on to the next generation as undernourished girls and women have children of their own. Under nutrition includes a wide array of effects including intrauterine growth restriction (IUGR) resulting in low birth weight; underweight, a reflection of low weight-for-age stunting, a chronic restriction of growth in height indicated by a low height-for-age [5].

Under nutrition is caused by a poor dietary intake that may not provide sufficient nutrients, and/or by common infectious diseases, such as diarrhoea. These conditions are most significant in the first two years of life, highlighting the importance of nutrition in pregnancy and the window of opportunity for preventing under nutrition from conception through 24 months of age. Sally McGregor (2015) a pioneer of studies on the effects of malnutrition on mental development, does an excellent job synthesizing the latest literature on the possible mechanisms through which PEM alters mental development. Evidence from longitudinal studies establishing an association between early malnutrition and later cognitive function with nutritional supplements and psychological stimulation are also discussed. A critical conclusion reached is that stimulation appears to have marked and sustained benefits indicating the need to incorporate it into treatment is a brief but thorough discussion of the added burden of HIV infection on PEM, touching on its impact on the prevalence and severity of secondary infections and the associated increase in mortality. This section ends with 5 recommendations on how to address the prevention and management of pediatric HIV. With protein-energy malnutrition (PEM) being implicated in about 60% of all child deaths, the republishing of this book by JOHN Waterlow is timely and necessary. Because the evidence indicates that most malnourished children die because of poor pediatric care by inappropriately trained medical staff, the new cover design depicting the “10 easy-to-remember steps” treatment guidelines is fitting [6].

The most eminent expert in PEM has written this book in simple language and with such clarity that it is remarkably easy to read. It is an authoritative and comprehensive review of all aspects of PEM. This edition is supplemented by 22 pages of new material based on the latest research in childhood PEM. For obvious reasons, great emphasis is placed on treatment. The discussion touches on the need for diverse channels to spread correct case-management practices and highlights the dramatic reductions in mortality after implementation of the 10 step treatment guidelines of the World Health Organisation (WHO). John Waterlow (2014) studied to assess the risk factors for severe acute malnutrition in children under the age of five showed that the socio economic risk factors for severe acute malnutrition were maternal illiteracy (OR=3.83), paternal illiteracy (OR=2.04, 95% CI), monthly family income of less than 50 USD (OR=3.44) and large family size with the number of children greater than 3 (OR=1.96). On risk factors for malnutrition in children under 5 years in Luang Prabang province, Laos, low maternal education was main risk factor for child malnutrition in the study area. It is recommended that an improvement in societal infrastructure, better maternal education and nutrition are needed to address the child malnutrition issue [7].

Materials and Method

Methodology is the systematic theoretical analysis of the methods applied to a field of study. It comprises the theoretical analysis of the body of methods and principles associated with a branch of knowledge. The methodology offers the theoretical underpinning for understanding which method, set of methods or called best practices can be applied to specific cases.

Accessible population

Among mothers of under five children living in the selected village of Guduvanchery was the accessible population.

Sample

Total 30 among mothers of under five children were selected who fulfilled inclusion criteria.

Sampling technique

The sampling technique used was non probability convenient sampling technique.

Inclusion criteria

Having under five children (1-5 years). Residing in selected rural area. Willing to participate in the study and having more than one child.

Exclusion criteria

Having children group more than 5 years. Working in health care sectors. Suffering with any chronic physical or mental illness.

Description and development of the tool

The tool used for this study was questionnaire it consists of two sections:

Section A

This section consist of 15 questionnaire to assess the demographic variables of the participants such as age, religion, economical status, education of mother, occupation of mother, type of family, pregnant age, baby weight, no of baby, birth space.

Section B

Questionnaire was used to assess the among mothers under five children. It has 15 questions, each question has three options:

Data collection procedure

The investigator had collected the data for one week. A prior permission to be obtained from the Community Leader. Informed consent was taken from the mothers and the questionnaire were distributed by the researcher to the mothers of under five children. The data collection was started from 12.03.2018 to 18.03.2018. The participants were given the questionnaire and were explained about the purpose and aim of study and the instructions for making the answers were made clear and they were made to mark the answers in the presence of the investigator. After the mother had marked the answers, the questionnaire were collected back carefully marked sure everyone had answer to all the questions and everyone return back the questionnaire.

Method of data analysis

Frequency and percentage distribution were used to determine demographic variables among mothers of under five children.

Frequency and percentage distribution with mean and standard distribution to assess the knowledge of PEM among mothers of under five children.

Inferential statistics

Chi square test were used to assess the level of knowledge among mothers of under five children.

Results

Considering the age distribution of mothers 15-25 years old 18 (60%), Mothers were 26-35 years old, 12(40%) and Mothers were 36-45 years old, 0(0%). Considering the religious distribution of mothers Hindu 18 (60%), Christian 5 (16.7%) and Muslim 7 (23.3%). Considering the socio economic status distribution low 0(0%), moderate 30 (100%) and high 0 (0%). Considering the mothers education distribution illiterate 2 (6.7%), higher secondary 20 (66.7%) and graduate 8 (26.7%). Considering the mothers occupation distribution housewife 26 (86.7%), self-employ 4 (13.3%) and government 0(0%). Considering the types of family distribution nuclear 24 (80%), joint 6 (20%) and single parent 0 (0%). Considering the maternal conception age distribution 18-25 years old 25 (83.3%), 26- 30 years old 3

(10%) and 31-36 years old 2 (6.7%) . Considering the baby weight distribution 1-5kg of baby 17 (56.7%), 6-10 kg of baby 5(16.7%) and 11-15 kg of baby 8 (26.7%). Considering the numbers of children distribution 0-1 child 16 (53.3%) ,2-3 child 14 (46.7%) and 4-5 child 0 (0%). Considering the birth spacing of children distribution of 0-1 years 17 (56.7%),2-3 years 8 (26.7%) and 4-5 years 5(16.7%) (Table 1 and Figures 1 to Figure 10).

Table 2 describes the knowledge level of mothers of under five children. On the basis of knowledge score 7(23.3%) had inadequate knowledge, 14 (46.7%) had moderately adequate knowledge and 9 (30%) had adequate knowledge. Figure 11 describe the knowledge level of mothers of under five children. On the basis of knowledge score 7 (23.3%) had inadequate knowledge, 14 (46.7%) moderate adequate knowledge and 9 (30%) adequate knowledge.

Table 1: Frequency and percentage distribution of demographic variable of mothers of under five children.

Demographic variables	Frequency	Percentage%
Age 15-25 Years	18	60%
26-35 Years	12	40%
36-45 Years	-	0%
Religious Hindu	18	60%
Christian	5	16.70%
Muslim	7	23.30%
Socio Low	-	0%
economic Moderate	30	100%
status High	-	0%
Mothers Illiterate	2	6.70%
education Higher	20	66.70%
secondary		26.70%
Graduate	8	
Mothers House wife	26	86.70%
occupation Self employ	4	13.30%
Government	-	0%
Types of Nuclear	24	80%
family Joint	6	20%
Single parent	-	0%
Maternal 18-25 Years	25	83.30%
conception 26-30 Years	3	10%
age 31-36 Years	2	6.70%
Baby weight 1-5 kg	17	56.70%
6-10 kg	5	16.70%
11-15 kg	8	26.70%
Number of 0-1 Child	16	53.30%
children 2-3 Child	14	46.70%
4-5 Child	-	0%
Birth 0-1 Year	17	56.70%
spacing of 2-3 Year	8	26.70%
children 4-5 Year	5	16.70%

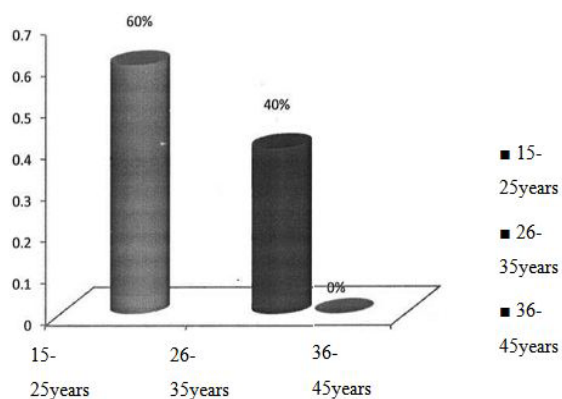


Figure 1. Percentage distribution of mother's age.

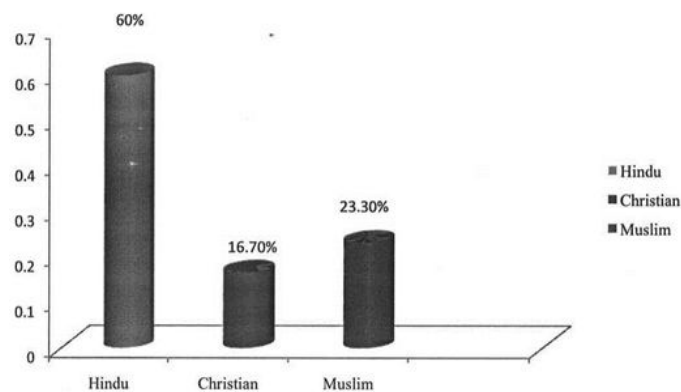


Figure 2. How the distribution of population according to their religious.

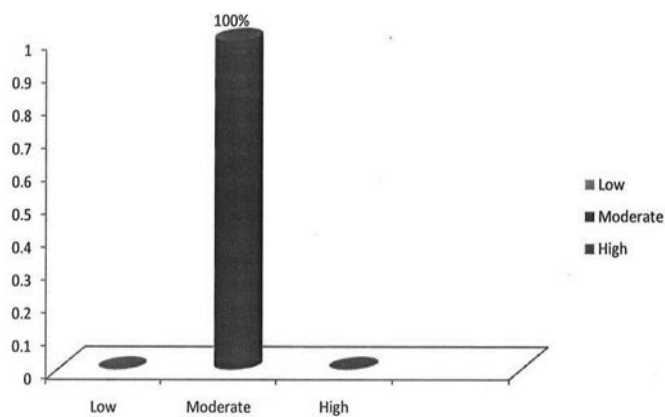


Figure 3. Percentage distribution of socio economic status.

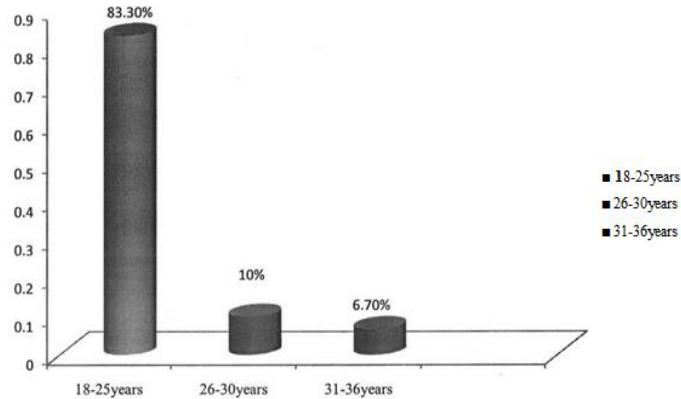


Figure 7. Percentage distribution of maternal conception age.

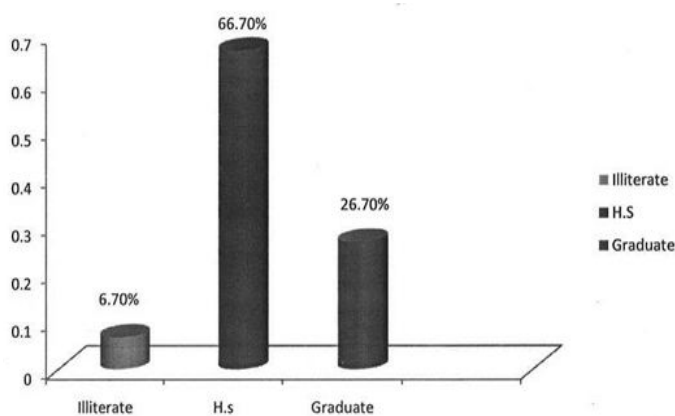


Figure 4. Percentage distribution of mother's education.

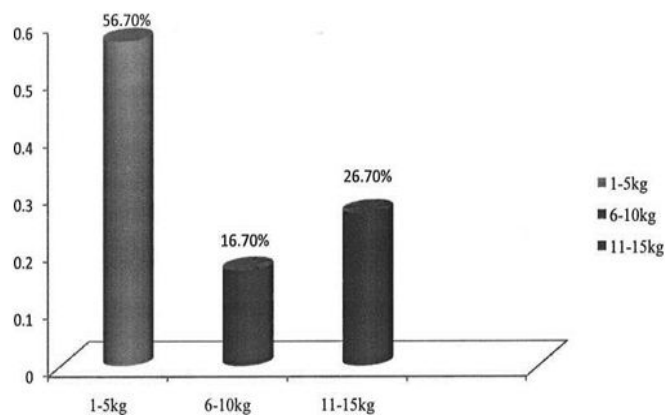


Figure 8. Percentage distribution of baby weight.

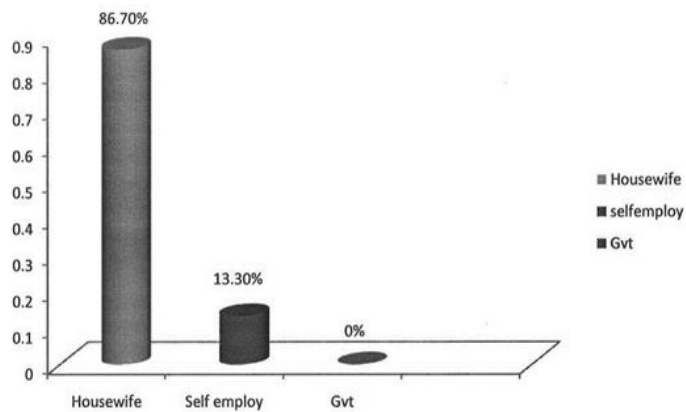


Figure 5. Percentage distribution of mother's occupation.

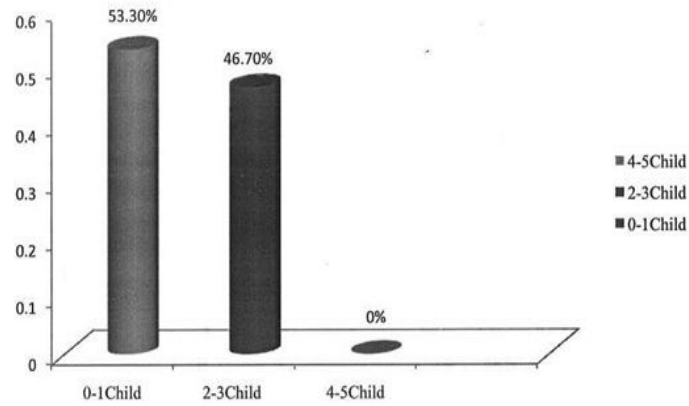


Figure 9. Percentage distribution of numbers of children.

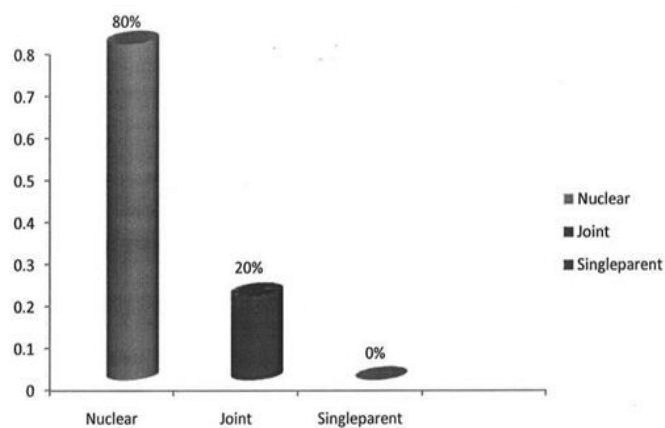


Figure 6. Percentage distribution of types of family.

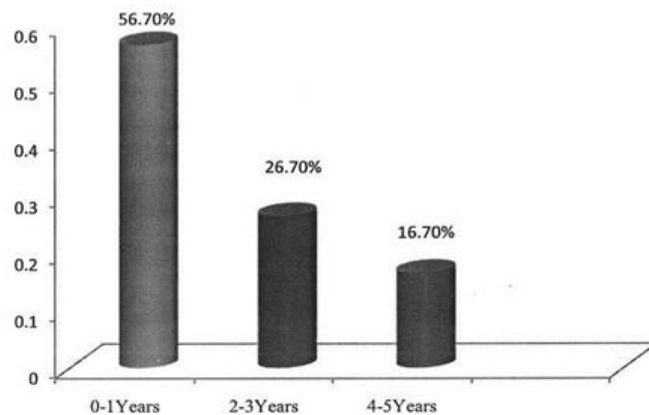


Figure 10. Percentage distribution of birth spacing of children.

Table 2: Distribution of mothers of under five children according to the knowledge scores.

S.NO	Knowledge level (score)	Frequency (f)	Percentage (%)
1	Inadequate	7	23.30%
2	Moderately adequate	14	46.70%
3	Adequate	9	30%

Table 3: Shows the association the level of practice with the demographic variables age, religious, socio economic status, mothers occupation, maternal conception age, baby weight and numbers of children are not significant statistical significance was calculated by using chi square test.

S.No	Demographic variables	Level of knowledge						Chi square	P-Value
		Adequate		Moderate		Inadequate			
		Score	%	score	%	Score	%		
1	Age								
	15-25 years	7	23.30%	7	23.30%	4	13.30%	x ² =6.4	Non-significant
	26-35 years	2	6.70%	7	23.30%	3	10%		
	36-45 years	0	0%	0	0%	0	0%		
2	RELIGIOUS								
	Hindu	5	16.70%	8	26.70%	5	16.70%	x ² = 4.2	Non-significant
	Christian	3	10%	1	3.30%	1	16.70%		
	Muslim	1	3%	5	16.70%	1	3.30%		
3	Socio economic status								
	Low	9	30%	14	46.70%	7	23.30%	x ² =0	Non-significant
	Moderate high	0	0%	0	0%	0	0%		
4	Mothers education								
	Illiterate	0	0%	1	3.30%	1	3.30%	x ² = 9.8	* Significant
	Higher secondary	7	23.30%	9	30%	4	13.30%		
	graduate	2	6.70%	4	13.30%	2	6.70%		
5	Mothers occupation								
	Housewife	7	23.30%	12	40%	7	23.30%	x ² =6.3	Non-significant
	Self-employed	2	6.70%	2	6.70%	0	0%		
	Government	0	0%	0	0%	0	0%		
6	Types of family								
	Nuclear	9	30%	10	33.30%	5	16.70%	x ² =3.18	* significant
	Joint	0	0%	4	13.30%	2	6.70%		
	Single parent	0	0%	0	0%	0	0%		
7	Maternal conception age								
	18-25years	8	26.70%	12	40%	5	16.70%	x ² = 1.8	Non-significant
	26-30years	1	3.30%	1	3.30%	1	3.30%		
	31-36years	0	0%	1	3.30%	1	3.30%		
8	Baby weight								
	1-5kg	5	16.70%	10	20%	2	6.70%	x ² =6.35	Non-significant
	6-10kg	1	3.30%	3	10%	1	3.30%		
	Self-employed	3	10%	1	33.30%	4	13.30%		
9	Numbers of children								
	0-1 child	5	16.70%	9	30%	2	6.70%	x ² = 2.3	Non-significant
	2-3child	4	13.30%	5	16.70%	5	16.70%		
	4-5child	0	0%	0	0%	0	0%		
10	Birth spacing of children								
	0-1 years	5	16.70%	9	30%	3	10%	x ² =3.9	*significant
	2-3years	4	13.30%	2	6.70%	2	6.70%		
	4-5years	0	0%	3	10%	2	6.70%		

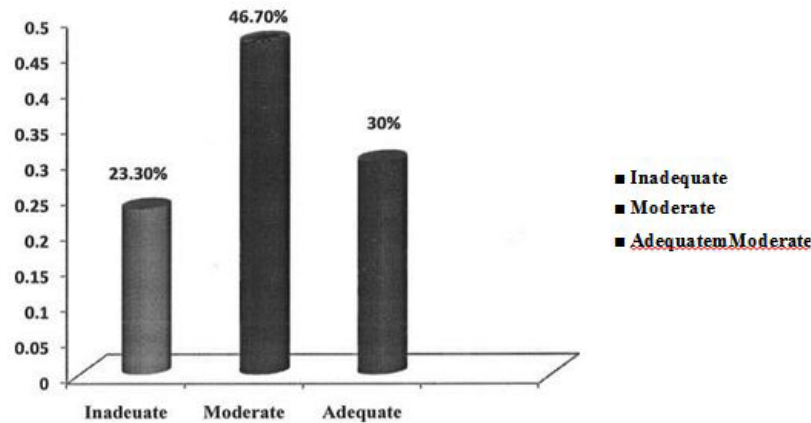


Figure 11. Frequency and percentage distribution of mothers of under five children according to the knowledge scores.

Table 3 shows the association the level of practice with the demographic variables age, religious, socio economic status, mothers occupation, maternal conception age, baby weight and numbers of children are not significant statistical significance was calculated by using chi square test.

Discussion

The study to assess the knowledge regarding protein energy malnutrition. Our study revealed that almost all respondents (94%) had heard about protein energy malnutrition findings are similar to conducted in selected communities. This observation demand the need to educate the under-five mothers on protein energy malnutrition so as to help them to understand and practice the preventive measures bidding this gap in knowledge is essential in the design of programs to educate the under-five mothers on protein energy malnutrition [8]. The focus of the study was to assess the knowledge of regarding protein energy malnutrition among the mothers of under five children at selected area of guduvanchery [9]. The first objectives of the study was to assess the knowledge regarding protein energy malnutrition among the mothers of under five children. Among the knowledge level of mothers. On the basis of knowledge score 9(30%) had adequate knowledge, 14(46.7%) had moderate knowledge and 7(23.3%) had inadequate knowledge. Jayasekera CR.(2017) In SriLanka the prevalence of PEM, was (51.9%),underweight (63.5%) and wasting (25.0%) was found to be considerably higher than the national prevalence (13.5%, 29.4%, 14.0%, respectively) [10,11].

The second objective was to find out association between knowledge scores and selected demographic variables among the mothers of under five children. The chi-square was used to associate the knowledge score with age, religious, socio economic status, mother's education, mother's occupation, type of family, maternal conception age, baby weight, number of children, birth spacing of the child. The study revealed that there was an association between knowledge of mothers having underfive children with demographic variables like mothers education, type of family, birth spacing of child and there was no association between knowledge of mothers of under five children with selected demographic variables like age, religion, socio economic status, mothers occupation, maternal conception age, baby weight, number of children. Cheal et al. [12]. A study was conducted by in Malaysia and based On "the development of questionnaire for the study of malnutrition. The result reveals children showing sign of malnutrition is in the from stunning, wasting and underweight for age. The aim of the study was to assess knowledge regarding malnutrition among mothers of under five children. To assess knowledge regarding protein energy malnutrition among mothers of under-five children. Find out an association between knowledge scores and selected sociodemographic variable among mothers of under five children. To prepare information booklet on protein energy malnutrition [13,14].

The research design applied for the study was descriptive research design. From 30 samples of mothers having under five children, researchers were selected by purposive sampling. The tool used for data collection consists of demographic variable and modified questionnaire to assess the knowledge

regarding protein energy malnutrition among mothers of under five children. The data was collected for a period of 2 weeks [15,16]. Descriptive statistics was used in statistical analysis, to assess the knowledge among mothers of under five children. Chi-square was used to find out the association between demographic variable with level of knowledge. According to knowledge level of mothers of under five children, knowledge score 9(30%) had adequate knowledge, 14(46.7%) had moderate knowledge and 7(23.3%) had inadequate knowledge. According to association between knowledge and demographic variables, there is significant between the mothers education, type of family, birth spacing of children [17,18].

Conclusion

Based on the findings of the present study, following conclusions were drawn, majority of the mothers had moderate knowledge 14(46.7) and 7 (23.3) had inadequate knowledge. There is significant association of the level of knowledge of the mothers with their demographic data such as mother's education ($X^2=9.8$), type of family ($X^2=3.18$), and birth space of children ($X^2=3.9$). Hence the knowledge of protein energy malnutrition among mothers of under five children can be enhanced through compassion, competence, conscience, confidence, and commitment among instructors working in the clinical area.

Funding

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Ethical approval

The study was approved by the Institutional Ethics Committee

Conflict of Interest

The authors declare no conflict of interest.

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References

- Augustyniak RA, Singh K, Zeldes D, and Singh M, et al. "Maternal protein restriction leads to hyperresponsiveness to stress and salt-sensitive hypertension in male offspring." *Am J Physiol Regul Integ Comparative Physiol* 298 (2010) 298:1375-1382.

2. Bellinger L, Sculley DV, Langley-Evans SC. "Exposure to undernutrition in fetal life determines fat distribution, locomotor activity and food intake in ageing rats." *Int J Obesity* 30 (2006): 729-38.
3. Bistran BR, McCowen KC, Chan S. "Protein-energy malnutrition in dialysis patients." *Am J Kidney Diseases* 33 (1999): 172-175.
4. Bosaeus I. "Nutritional support in multimodal therapy for cancer cachexia." *Supportive Care Cancer* 16 (2008): 447-451.
5. Meyers LD, Hellwig JP, Otten JJ. "Dietary reference intakes: The essential guide to nutrient requirements." National Academies Press (2006).
6. Franco VH, Hotta JK, Jorge SM, and Dos Santos JE. "Plasma fatty acids in children with grade III protein-energy malnutrition in its different clinical forms: Marasmus, marasmic kwashiorkor, and kwashiorkor." *J Tropical Pediatr* 45 (1999): 71-75.
7. Hernández A, Burgos H, Mondaca M, and Barra R, et al. "Effect of prenatal protein malnutrition on long-term potentiation and BDNF protein expression in the rat entorhinal cortex after neocortical and hippocampal tetanization." *Neural Plasticity* 2008 (2008).
8. Liu T, Howard RM, Mancini AJ, and Weston WL, et al. "Kwashiorkor in the United States: Fad diets, perceived and true milk allergy, and nutritional ignorance." *Arch Dermatol* 137 (2001): 630-6.
9. Otele DO, Bunu SJ, Edoni E. "Mothers perception analysis on nutritional health and malnutrition among children under 5 years in the Niger Delta region." *Asian J Res Reports Gastroenterol* (2019); 1-9.
10. Muscaritoli M, Molfino A, Bollea MR, and Fanelli FR. "Malnutrition and wasting in renal disease." *Current Opinion Clin Nutrition Metabol Care* 12 (2009): 378-383.
11. Portman OW, Neuringer M, Alexander M. "Effects of maternal and long-term postnatal protein malnutrition on brain size and composition in rhesus monkeys." *J Nutr* 117 (1987): 1844-1851.
12. Rasmussen KM, Habicht JP. "Maternal supplementation differentially affects the mother and newborn." *J Nutrition* 140 (2010): 402-406.
13. Slater-Jefferies JL, Lillycrop KA, Townsend PA, and Torrens C, et al. "Feeding a protein-restricted diet during pregnancy induces altered epigenetic regulation of peroxisomal proliferator-activated receptor- in the heart of the offspring." *J Develop Origins Health Diseases* 2 (2011): 250-255.
14. Sutton GM, Centanni AV, Butler AA. "Protein malnutrition during pregnancy in C57BL/6J mice results in offspring with altered circadian physiology before obesity." *Endocrinol* 151 (2010): 1570-1580.
15. Toledo FC, Perobelli JE, Pedrosa FP, and Anselmo-Franci JA, et al. "In utero protein restriction causes growth delay and alters sperm parameters in adult male rats." *Reproductive Biol Endocrinol* 9 (2011): 1-9.
16. Toscano AE, Ferraz KM, Castro RM, and Canon F. "Passive stiffness of rat skeletal muscle undernourished during fetal development." *Clinics* 65 (2010): 1363-1369.
17. Ubesie AC, Ibeziako NS, Ndiokwelu CI, and Uzoka CM, et al. "Under-five protein energy malnutrition admitted at the University of in Nigeria teaching hospital, Enugu: A 10 year retrospective review." *Nutrition J* 11 (2012): 1-7.

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