ORIGINAL ARTICLE

Dietary beliefs among informal caregivers regarding common childhood diseases in rural north-west India

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Abstract | Introduction | Methodology | Results | Conclusion | References | Citation | Tables / Figures

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Abstract

Background: Dietary practices among infants and children are predictor of their growth and development. India being a huge of diverse cultures, diversity in beliefs and practices regarding diet during childhood illnesses is expected. Harmful beliefs and practices can contribute to malnutrition among children. These beliefs can have adverse consequences in already sick children. **Aims and Objectives**: To assess the dietary knowledge, beliefs and practices of rural care givers during childhood illnesses. **Material & Methods**: This cross-sectional descriptive study was conducted among 271 rural informal (parent / family member) caregivers in one of the sub-health centres which was selected using simple random sampling technique. In the context of this study, the word informal care-giver was used for parent/family member of the child, preferably a mother with a child / children aged less than five years. The survey tool was an open ended and pretested questionnaire which was developed by public health expert's familiar with the culture of the study setting and was pilot tested before administration. For the purpose of recruiting the study participants a house to house survey was conducted and the data thus collected was analyzed in percentages. **Results**: Informal Caregivers had low knowledge of common childhood illnesses as well as the reasons of their causation. Majority of them consulted a doctor in the event of child's illness. 53.81% reduced feeding and 31.93% diluted diet during child' illness but significantly 77.85% didn't change breastfeeding practice during illness. As far as the beliefs regarding dietary practices were concerned, it found that egg, meat, chicken and jaggery were labelled hot foods while curd, butter milk and vegetables were labelled as cold foods. Rice water and khichadi were preferred in diarrhoea but spicy food and milk were restricted. Ginger and Tulsi tea were preferred in respiratory infections while ice-cream and curd / milk were withheld. **Conclusion:** Hot and cold beliefs regarding foods are firmly rooted in the study population, so dietary education has a key role to play but it has to be within socio-cultural milieu of the people. It is imperative to train medical and para-medical staff in nutrition curriculum to promote healthy eating habits in the population.

Keywords

Beliefs; Practices; Caregivers; Child Nutrition; Dietary Practices

Introduction

India is a country of diverse cultures and societies. This diversity is also seen in the beliefs and practices of its people regarding health care. The role of beliefs and practices among caregivers regarding diet during childhood illnesses is known. (1) Harmful beliefs and practices can contribute to malnutrition among children. Importantly these beliefs can have adverse consequences in already sick children. Popular culture and folk of Asia, Africa and Latin America use hot-cold concepts of healthcare. Similar, to this are the concepts of humoral traditions of European and North American cultures. In Malay community, illness is classified as either hot or cold and their occurrence is presumed, post facto, to be the result of dietary imbalance. People generally conceive animal products, fatty and spicy food as hot while fruits and vegetables as cold, hot foods are higher in calories, proteins and fats than cold foods while cold foods are higher in water content than hot foods. (1) Malnutrition remains an important direct & indirect cause of increased morbidity and mortality in children across nations.

Poverty and lack of dietary education have been identified as major bottlenecks in the rural areas where illiteracy, superstition and dietary beliefs put the already vulnerable population of children at further risk of malnutrition. (2) Diet restriction and reduction in feeding frequency during childhood morbidity is one such belief which adds to malnutrition and in turn to childhood diseases increases the risk for mortality. (2) The caregivers deprive the child of the required amount of energy and micronutrients by reducing the consistency and frequency during illness. Identification of non-vegetarian food as a risk factor for aggravating by producing heat in the body is another dietary belief that may lead to malnutrition. (2). Eighty percent of the nutrition-related mortality is associated with a mild form of malnutrition according to the WHO reports. (2) Further, it is a well-known fact that calories are consumed during morbid process, so practices of food restriction during the state of illness further leads to calorie depletion and resulting malnutrition further accentuates episodes of illness in these children. (3)

An extensive review of literature on PubMed revealed lack of data on dietary beliefs among informal caregivers regarding common childhood diseases from our part of India. Therefore, the present study was planned to identify the caregiver's (informal) beliefs regarding hot and cold foods and the practices they adopt during childhood diseases. In the context of this study, the word informal care-giver has been used for parent/family member of the child, preferably a mother with a child/children aged less than five years.

Aims & Objectives

To assess the dietary knowledge, beliefs and practices of rural care givers during childhood illnesses.

Material & Methods

This population based cross-sectional study was conducted at Miran Sahib area of Jammu district in Jammu and Kashmir state of north-west India. This area caters to a population of approximately 22,000 and has 4 sub-centres under its jurisdiction. One of the sub-centres was selected using simple random sampling technique and all the households were to be covered in this sub-centre. The sub centre is located at a distance of 2.5 kms from the nearest PHC and 11 kms from the nearest tertiary care centre.

A house to house survey was conducted in the entire village and purpose of the study was explained to the mothers. Those mothers who were willing to participate and available at their home on the day of survey were included in the current study. The mothers who refused to give informed written consent and who were not available on the day of visit were excluded from the study. If more than one caregiver was present in the household, only one of them was included in the survey and the rest excluded. The house to house survey was conducted by undergraduate medical students. All the houses were visited for data collection and in all 271 caregivers were interviewed after obtaining a written informed consent from participants.

A team of public health expert's familiar to the local culture prepared a questionnaire to acquire information about mother's knowledge, belief sand practices regarding dietary patterns during childhood illnesses. This questionnaire was pilot

tested on a group of 25 rural mothers in the pediatric outpatient department of a tertiary care centre in Jammu. After necessary amendments, this validated questionnaire was used in the survey. The predesigned and pretested open ended semi-structured questionnaire thus developed was rehearsed with students and converted to local dialect before it was put to use. Multiple responses wherever applicable, were recorded from respondents. It was emphasized that tool was put only to the care giver (mother) and in case she was employed, the next vested in responsibility of child care at home was interviewed to be part of the study. The data collection was directly supervised by the authors. After collection, data was tabulated and analyzed and presented in percentages. Epi-info software (version 7.2) was used for purpose of analysis.

Results

A total of 271 caregivers of children less than 5 years of age formed the study participants. Of these 271, 108 were in the age group of 25-29 years (39.85%). As far as literacy status of the respondents was concerned, it was found that more than half (137/271) of them were non-literate and only 33.9% (92/271) of them were educated up to 10th class. Most of mothers were home makers with only 1.1% (3/271) employed as teachers. Response was recorded and "N" represents the total responses including multiple responses from the respondents. Regarding knowledge of common childhood diseases, the respondents knew of respiratory infections, diarrhoea, fever and few other diseases and recorded others as Jaundice, Vomiting, Pain abdomen. 5/271 (1.84%) mothers could name whooping cough. No respondent could specify measles, tetanus, malaria and dengue. However, pneumonia was known to majority of women and has been included in ARTI (Table 1).Though significant number (80%) of women had the scientific knowledge of diseases but one fifth of them (19.37%) still believed diseases were caused by wrath of God or evil eye (Table 2). Among the common practices adopted by mothers during illness of child, it was found that majority of the caregivers were consulting a doctor for the treatment of the child which is indeed a very healthy sign (Table 3). The results have revealed that >4/5thof the care givers were either diluting or reducing the diet during illness (Table 4). Three-fourth of the respondents informed that breast feeding frequency was kept same as before the illness which is a very healthy practice adopted by the caregivers. (Table 4). Almost all caregivers agreed with the concept of hot and cold and only 2 mothers out of a total of 271 caregivers held no such concept of hot or cold food. Table 5 depicts the foods that were recorded in hot and cold categories as reported by the caregivers. The caregivers beliefs regarding dietary preferences and restrictions during common childhood diseases like diarrhea and respiratory infections are shown in Figure 1,2,3,4.

Discussion

The results of the current study have thrown diverse results which are discussed in context of the currently available literature. The knowledge of the caregivers regarding childhood illnesses was found to be much lower in comparison to the results of a study conducted in Bangladesh. (4) The low levels of knowledge among the respondents could be best explained due to low levels of literacy among them as half of them were illiterates.

In the event of illness of child, 63% caregivers were attending a qualified doctor while 22% went to a nearby chemist. These results are in agreement with those reported by Awoke W *et al* (5) in Ethopia. However, contrasting results were reported in a study from Nepal (6) where only 26.4% mothers were going to allopathic medical practitioners. In another study conducted in Kenya, Mbagaya GM *et al* (7) reported worrisome results where 32.4% mothers were administering drugs to sick children without seeking any medical attention. These findings paint a gloomy scene of both the health care services as well as low knowledge among care givers especially in the developing and low-income nations. An extensive search on pubmed has revealed paucity of data resulting in lackhe data regarding dietary beliefs and practices within India.

Regarding dietary practices during childhood illnesses, it was found that half of the respondents were reducing and one third of them were diluting the diet. These results have shown a marked resemblance to the results of other studies. (8,9,10,11,12) One positive finding in the current study was found whereby 77% of the respondents were not changing the frequency of breastfeeding during the illness of the child.

When beliefs regarding hot and cold foods were explored among the respondents, they were found to be widely prevalent. The results concur with those

reported by Benakappa AD *et al*. (8) The belief of hot and cold food has been around since ages. This belief is present to a varying extent among the societies depending on factors like literacy, rural or urban background and influence of elders on the diet of young ones. Even Inam SNB *et al* (13) in a study of medical students reported hot and cold belief regarding food to the tune of 90%.

Authors Contribution

All authors have contributed equally in this article.

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Tables

TABLE 1 KNOWLEDGE OF CAREGIVERS REGARDING COMMON DISEASES AMONG UNDER-FIVES (N=670):

Disease	No. of responses	Percentages
ARTI	245	36.56
Diarrhoea	176	26.26
Fever	196	29.25
Others	53	07.91

TABLE 2 REASONS CITED BY THE CAREGIVERS FOR OCCURRENCE OF DISEASES IN CHILDREN (N=604)

Reason	No.of responses	Percentage
Infection	182	30.13
Water borne	159	26.32
Food borne	128	21.19
Superstition	117	19.37
Others	18	02.98

TABLE 3 TREATMENT OPTIONS TAKEN BY CAREGIVERS DURING CHILDREN’S SICKNESS (N=271)

	No of responses	percentage
Qualified doctor	171	63.09
Near- by chemist	60	22.14
Ayush doctor	16	5.90

Quacks	12	4.42
At home	12	4.42

TABLE 4 CAREGIVERS BELIEF REGARDING DIETARY CHANGES AND BREAST FEEDING DURING ILLNESS (N=271)

Dietary Changes	No of Responses	Percentage
Reduce feeding	143	52.76
Dilute the diet	86	31.73
Stop feeding	19	31.73
Increase quantity	19	7.01
Increase frequency	7	2.58
Breast feeding frequency	16	5.90
Decreased	25	9.22
Increased	35	12.91
Stop breastfeeding	0	0
Same as before illness	211	77.85

TABLE 5 OPINION ON NATURE OF FOODS (HOT AND COLD) N=611 (MULTIPLE RESPONSES HAVE BEEN ACCEPTED GIVING RISE TO HIGHER NUMBER OF TOTAL RESPONSES)

Food items (Hot Foods)	No of responses	Percentages
Egg, meat, chicken	162	26.4
Jaggery	126	20.5
Fruits*	98	16.0
Dry fruit	59	9.61
Others**	166	27.1
Food items (Cold Foods)		
Citrus fruits	213	38.86
Curd/butter milk	155	28.28
Radish	51	9.30
Other Vegetables	29	5.29
Pulses	160	2.91
Others***	84	15.2

***Fruits like Mango, Papaya**
****Ghee, fried food, cereals, tea, dalia and pulses like Bengalgram, husked Bengal gram, horse gram (kulth), lentils.**
*****Pulses like Kidney beans (Rajmah, black gram, green gram,) rice, milk.**

Figures

FIGURE 1 FOOD ITEMS

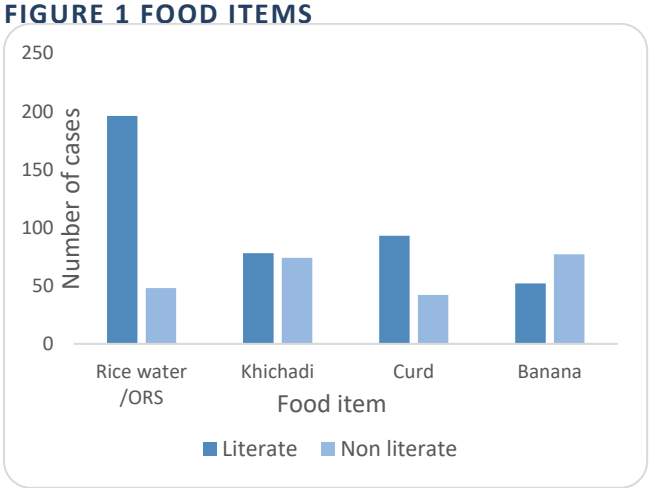

FIGURE 2 FOOD ITEMS AVOIDED

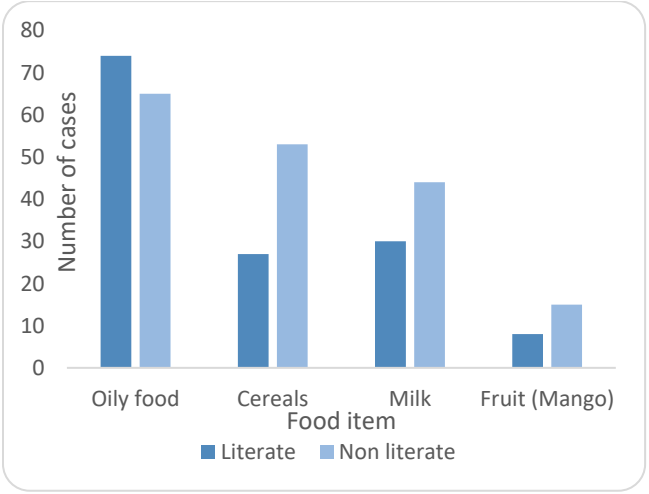

FIGURE 3 FOOD ITEMS

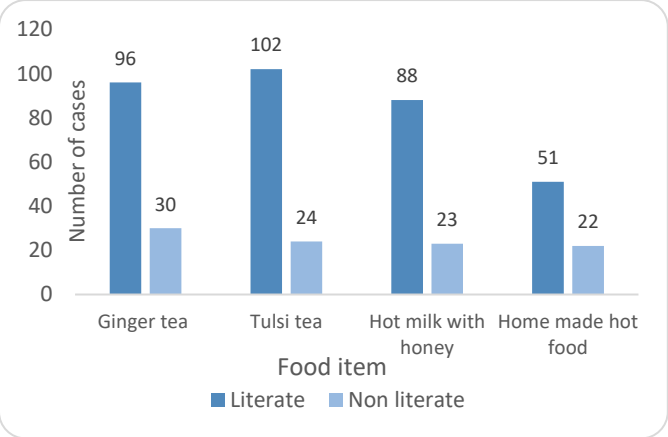

FIGURE 4 FOOD ITEMS