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Original Research Article

Perception and practice regarding management of childhood fever among parents of under five children in tertiary level hospital, Nepal

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ABSTRACT

Background: Fever is an extremely common occurrence in paediatric patients and the most common cause for hospital visit. Lack of knowledge regarding childhood fever can cause distress and anxiety among parents. It is one of the main reasons parents seek reassurance and advice from health care professionals. The objective of the study was to assess the perception and practice regarding management of childhood fever among parents of under five children.
Methods: The analytical cross sectional study design was conducted among 135 parents of under five children admitted in medical ward of Kanti childrens' hospital. Kathmandu Nepal, from December 2019 to January 2020. Face to face interview was done for data collection. Self-developed five points Likert scale was used for assessing perception and checklist was used for practice. Obtained data were analyzed by using SPSS version 16, descriptive and inferential statistics was used.
Results: Study shows that majority of respondents were of age less than 30 years and 81% were female. Greater part of respondents 71.8% had fair perception on childhood fever. At the same time, half of the respondents 50.4% had poor practices on childhood fever management. The level of perception is strongly associated with educational status (p=0.002) while level of practices is strongly associated with number of children (p=0.040 and residence (p=0.001) of respondents.
Conclusions: Overall findings showed that more than two third of the respondents had fair perception towards childhood fever and about half of the respondents had poor practices of childhood fever management which concluded the need of educational intervention and additional research regarding childhood fever.

Keywords: Childhood Fever, Perception, Practice, Fever management, Parents

INTRODUCTION

Fever is common symptom in young children that causes significant worry and concern for parents and is one of the main reasons parents seek reassurance and advice from health care professionals.[1] It can be defined as regulated rise in temperature than usual variations which is measured by thermometer if a child's temperature is at or above 100°F (37.8°C) if measured orally, 100.4°F (38°C) if measured rectally and 99°F (37.2°C) if measured axillary.[2]

Fever in young children usually indicates underlying infection. Common conditions include upper respiratory tract infections, flu, ear infections, tonsillitis, urinary tract infections, chicken pox, or whooping cough. Other reasons for a raised temperature in a child include teething or vaccinations.[3]

Fever is one of the important contributing causes of childhood morbidity and mortality in Nepal. For each child under age of five years, mothers were asked if the child had experienced a cough accompanied by short,

rapid breathing, or difficulty in breathing as a result of a chest-related problem (symptoms of ARI); a fever; or an episode of diarrhea in the two weeks preceding the survey. Overall, 21% had a fever in the two weeks preceding the survey which was highest among all but the data is based on a mother's perception of illnesses without validation by medical personnel.[4]

Most parents lack the knowledge to assess the severity of their children's illness and some parents believe fever to be a disease in itself. Parents may experience negative emotions such as helplessness and guilt if they do not act to reduce their child's temperature. Parents' misconceptions about fever increase their anxiety and eventually influence their management strategy. When the duration of fever exceeds their expectations, they bring their children to a doctor. Due to delay in seeking of medical attention, lead to complications and mortality.[5]

The objective of the study was to assess the perception and practice regarding management of childhood fever among parents of under five children.

METHODS

An analytical cross-sectional study was conducted in Kanti's Children Hospital, Kathmandu. This institution is the tertiary level referral centre in central Nepal. Study period was from December 2019 to January 2020. The study population was the parents of under five children admitted in medical ward. Sample size was estimated using p=0.27.[7] Total 131 parents were included by using purposive sampling method. Parents who were not willing to participate were excluded.

Face to face interview was done for collecting data. Self-developed five points Likert scale was used to identify level of perception and checklist was used to find out the level of practice regarding management of childhood fever. There was total 12 statements in Likert scale consisting 9 positive statements and 3 negative statements. Each positive statement was given score for strongly agree, agree, neutral, disagree and strongly disagree as 5, 4, 3, 2, 1 and each negative statement was given score for strongly agree, agree, neutral, disagree and strongly disagree as 1, 2, 3, 4, 5.

Perception was categorized into three level. The total score for perception was 60. Score more than or equal to 45 was categorized as having good perception, Score between 30 to 45 as fair perception: and score less than 30 as poor perception.[17]

Check list to measure the level of practice regarding management of childhood fever consisted of 14 statements. Each correct answer was given a score of one and a wrong answer score of zero. The maximum score was 14. Practice was further categorized into three level. Good practice: practice more than or equal to 75% of correct response. Moderate practice: practice between 50 to 75% of correct response. Poor practice: Practice less than 50% of correct response.[18]

Pre-testing was done in observation ward of Kanti childrens' hospital on different time period. The data were edited, organized, coded, entered and analyzed through SPSS (statistical package for social science) version 16 software program.

Descriptive statistics and fisher extract test was used as inferential statistics. The probability $p<0.05$ was considered statistically significant at 95% confidence interval. Ethical clearance was taken by institutional review committee of KCH. Written consent was obtained from the study participant.

RESULTS

The study showed that more than half of respondents (53.4%) were of age less than 30 years and majority (81%) were female (mother). About (36.6%) of respondents had only one child. Among the respondents, majority of them (73.3%) were Hindu and (31.3%) were Janajati. About (44.3%) were of secondary level and (38.2%) were homemaker. More than half of respondents (53.4%) were from urban area (Table 1).

The study revealed that majority of the respondents (71.8%) had fair perception regarding childhood fever, 21.4% of them had good perception while only 6.9% had poor perception (Table 2).

This study showed that half of the respondents (50.4%) had poor practices regarding management of childhood fever while (46.6%) of total respondents had moderate practices and at the same time, only (3.1%) of them had good practices (Table 3).

The above findings of this study illustrated that there was no significant association between level of perception regarding childhood fever with age of respondents (p=0.795), sex of respondents (p=0.508), no. of children (p=0.241), ethnicity of respondents (p=0.115), religion (p=0.944), residence of respondents (0.416), occupation of respondents (p=0.190) whereas, statistically significant association seen between level of perception and educational status of respondents (p=0.002) (Table 4).

Table 5 represents the association of level of practice with socio demographic variables. There was no significant association with age of respondents (p=0.098) and sex of respondents (p=0.508) while significant association was identified with number of children (p=0.040). Similarly, the level of practice was not associated with ethnicity of respondents (p=0.323) and religion of respondents (p=0.345). Likewise, in this study, no association of level of practice was seen with educational status of respondents (0.926) and occupation of respondents (p=0.725). But there was significant association with residence of respondents as well (p=0.001).

Table 1: Socio-demographic characteristics of the respondents, (n=131).

Variables	Frequency	Percentage (%)
Age group (years)		
<30	70	53.4
>30	61	46.6
Sex		
Female	81	61.8
Male	50	38.2
Number of living children		
1 child	48	36.6
2 children	44	33.6
More than/equal to 3 children	39	29.8
Ethnicity		
Janajati	41	31.3
Brahmin/ Chhetri	35	26.7
Dalit	26	19.8
Others#	29	22.1
Religion		
Hinduism	96	73.3
Others*	35	26.7
Educational status		
Cannot read and write	21	16.0
Can read and write/ primary level	22	16.8
Secondary level	58	44.3
Higher secondary level and above	30	22.9
Occupation		
Home maker	50	38.2
Agriculture	29	22.1
Service	21	16.0
Business	17	13.0
Daily wages	14	10.7
Residence		
Urban	70	53.4
Rural	61	46.6

Others*-Buddhism, Muslim, Christian; Others#-Madhesi, Muslim

Table 2: Level of perception on childhood fever, (n=131).

Level of perception	Frequency	Percentage (%)
Good (45-60)	28	21.4
Fair (30-45)	94	71.8
Poor (less than 30)	9	6.9

Table 3: Level of practices of childhood fever management, (n=131).

Level of practices	Frequency	Percentage (%)
Good (>50%)	4	3.1
Moderate (50%-75%)	61	46.6
Poor (75% and more)	66	50.4

Table 4: Association between level of perception and socio-demographic variables, (n=131).

Selected variables	Level of perception			P value
	Good	Fair	Poor	
Age group (Years)				
<30	14	52	4	0.795
>30	14	42	5	

Continued.

Selected variables	Level of perception			P value
	Good	Fair	Poor	
Sex				
Female	15	61	5	0.508
Male	13	33	4	
Number of living children				
1 child	11	34	3	0.241
2 children	13	29	2	
More than or equal to 3 children	4	31	4	
Ethnicity				
Janajati	8	31	2	0.115
Brahmin/ Chhetri	13	21	1	
Dalit	2	21	3	
Others#	5	21	3	
Religion				
Hinduism	20	68	7	0.944
Others*	8	25	2	
Educational status				
Cannot read and write	0	17	4	0.002
Can read and write/ primary level	4	17	1	
Secondary level	11	43	4	
Higher secondary level and above	28	94	0	
Occupation				
Home maker	6	40	4	0.190
Agriculture	6	21	2	
Service	8	13	0	
Business	6	10	1	
Daily wages	2	10	2	
Residence				
Urban	18	48	4	0.416
Rural	10	46	5	

P<0.05=statistical significant, Fisher Exact Test, * Buddhism, Muslim, Christian, # Madhesi, Muslim.

Table 5: Association between level of perception and socio-demographic variables, (n=131).

Selected variables	Level of perception			P value
	Good	Moderate	Poor	
Age group (Years)				
< 30	1	28	41	0.098
>30	3	33	25	
Sex				
Female	15	61	5	0.508
Male	13	33	4	
Number of living children				
1 child	0	18	30	0.040
2 children	3	19	22	
More than or equal to 3 children	1	24	14	
Ethnicity				
Janajati	1	16	24	0.323
Brahmin/ Chhetri	0	21	14	
Dalit	1	13	12	
Others#	2	11	16	
Religion				
Hinduism	2	47	47	0.345
Others*	2	14	19	

Continued.

Selected variables	Level of perception			P value
	Good	Moderate	Poor	
Educational status				
Cannot read and write	0	11	10	0.926
Can read and write/ primary level	1	9	12	
Secondary level	2	25	31	
Higher secondary level and above	1	16	13	
Occupation				
Home maker	0	24	26	0.725
Agriculture	2	15	12	
Service	1	12	8	
Business	0	8	9	
Daily wages	1	2	11	
Residence				
Urban	3	42	25	0.001
Rural	1	19	41	

P<0.05=statistical significant association, Fisher Exact Test, * Buddhism, Muslim, Christian, # Madhesi, Muslim.

DISCUSSION

Fever is a frequently reported symptom in many childhood illnesses including malaria, diarrhea, pneumonia, measles, polio, and tuberculosis. It remains a major cause of morbidity among under five children.[6] Parental fear towards childhood fever leads to overly aggressive management by the parents, which at times have harmful effects on children and also results in overcrowding of the hospitals and inefficient allocation of health care resources.[7]

In this study the mean age of respondents is 28.7 years which is consistent with the mean age of the respondents of study in urban India.[8] Majority of respondents are female 61.8% which is similar to the study conducted in Saudi Arabia.[8] Similarly, 36.6% have one child and 38.2% are home makers which is supported by the study conducted in Urban India.[7] Likewise, one third of the respondents (31.3%) are Janajati and 73.3% are Hindu. Regarding educational level, majority of the respondents have secondary level education (44.3%) which is similar to the study conducted in Nigeria.[9] In this stud, 70% of total respondents reside in urban area. Concerning the source of information, 37.4% of the respondents considered health personnel as their source of information which is supported by the study conducted in Iran.[15]

Respondents 31.3% agree and 29% strongly agree with incorrect statement of fever i.e., fever is a disease rather than symptom disease while in the study Kuching, East Malaysia majority of the respondents 75.8% respond to correct definition. As well as, in the same study in East Malaysia, 91.1% responded that fever is considered when body temperature is above normal which supports the results of this study too.

In this study, majority of the respondents disagree with the evil spirits as cause of fever while 11% of respondents agree with it in the study conducted in Ghana.[10]

About one third of respondents (32.1%) responded neutral to febrile convulsion as most common complications of fever which is unlike to study conducted in Iran where majority 60% respondents believed.[11]

Majority of the respondents 71.8% have fair perception regarding childhood fever which is inconsistent with the study conducted in Tanzania in which majority of the respondents perceived childhood fever causing harmful outcomes.[6]

Considering the practice of assessing fever, study in Turkey showed that 45.8% measured temperature with thermometer which is consistent with current finding as 42% confirm fever by using thermometer.[12] Similarly, 82.4% assess the temperature by touching with hand is shown in study conducted in Ghana which supports the result of our survey as 87% assess temperature by touching with hand.[10]

Study in Morocco showed that 85.9% used paracetamol during fever which supports the results in which 82.4% of respondents used paracetamol.[13] As well as, least of the respondents 9.2% consider the weight.[8] More than half of the respondents (61.1%) use antibiotics during fever which is similar to the finding of study done in India. The incorrect practice of giving cold bath during fever in this study is 14.5% which is far more than among the respondents in India that is 2%.[7]

In this study, 66.4% wake up child during sleep to give paracetamol which is not consistent with study conducted in Turkey in which 33.2% do not wake up during night.[14] Practice of giving plenty of fluid is among majority of respondents 71% in this study which is similar to the study done in Ghana i.e. 60.8%.[16]

Half of the respondents 50.4% have poor management practices in this study which is consistent with the similar study conducted in Urban India in which prevalence of poor management practices is 73%.[7]

No significant association was seen between level of perception and age of respondents (p=0.795) where as in Ireland, statistically significant association between parental worry and age of the parents (p=0.049).[1] There was strong association observed with educational status of respondents (p=0.002). The association was significantly strong between level of practice and residence of respondents (p=0.001) in this study. In Saudi Arabia number of children is strongly associated with practices of giving antipyretics during childhood fever management which is consistent with our findings in which strong association is seen with number of children (p=0.040) of the respondents.[8]

Limitation

The study was conducted only in general medical ward of Kanti childrens' hospital among parents of patients aged under 5 years. Total number of mothers was greater than fathers which could make results of this research more applicable to maternal rather than paternal viewpoint.

CONCLUSION

In conclusion, two third of respondents have fair perception regarding childhood fever. Strong association was seen between level of perception and educational status of respondents while no association is seen with other selected variables. Similarly, half of the respondents have poor practices regarding childhood fever management. Majority of respondents assessed the temperature only by touching the body of child and more than half visited traditional healer for treatment of fever while majority of parents used home remedies. Level of practice is strongly associated with number of children and residence of respondents.

Recommendation

Replication of this study can be done with larger samples in different settings to validate and generalize findings.

Educational interventions can be conducted regarding childhood fever management at home among parents of under five children which will further guide them in caring for their febrile child, referring them on time for better out comes.

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