# **Original Research Article**

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# Relationship between maternal education and socioeconomic status on knowledge, attitude and practice of mother and her child regarding acute diarrhoeal diseases

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### **ABSTRACT**

**Background:** In India, diarrhoea caused more than 130,000 child deaths in 2013. This also accounts for roughly one-fourth of all global diarrhoea deaths among children under five years of age. The incidence of diarrhoeal disease in rural India is 12% and in urban India is 9%. Acute diarrheal disease is both preventable and treatable. Untreated severe diarrhoea leads to fluid loss and it may be life-threatening especially in young children and among the people who are high risk like malnourished or have impaired immunity.

**Methods:** A cross sectional study was carried out among the secondary high school children (8<sup>th</sup> std) Azad high school, Kasegaon to find out the relationship between maternal education and socioeconomic status on knowledge, attitude and practice of mother and her child regarding acute diarrhoeal diseases. A pre-structured and pretested questionnaire was used to get the information regarding definition, causes, signs, symptoms, treatment, preparation of ORS, prevention of diarrheal etc.

**Results:** Nearly 57% of the mothers had school education and 10% had college education and illiteracy was 36%. As per the occupation 46.6% were farmers, 30.6% were labours and 14% were housewives. Mother's education was significantly associated with children Knowledge, attitude whereas practice was not associated. Illiterate mothers had significant poor knowledge and attitude.

**Conclusions:** Maternal education and maternal socio economic status has important role is ascertaining the knowledge, attitude and practice of her children regarding acute diarrhoeal diseases.

Keywords: Maternal education, Socio economic status, Acute diarrheal diseases

#### INTRODUCTION

According to a report of UNICEF, diarrhoeal diseases account for nearly 1.3 million deaths per year among under-five years children. This makes the diarrhoeal diseases second most common cause of child deaths worldwide. More than half of the mortality occur in just five countries i.e. India, Nigeria, Afghanistan, Pakistan and Ethiopia. In India, diarrhoea caused more than

130,000 child deaths in 2013.<sup>2</sup> This also accounts for roughly one-fourth of all global diarrhoea deaths among children under five years of age.<sup>3</sup> The incidence of diarrhoeal disease in rural India is 12% and in urban India is 9%.<sup>4</sup> Acute diarrhoeal disease is both preventable and treatable. Untreated severe diarrhoea leads to fluid loss and it may be life-threatening especially in young children and among the people who are high risk like malnourished or have impaired immunity. Source of

infection is through contaminated food or drinking-water or from person to person due to a result of poor hygiene.

A important determinant of child health is the knowledge of the child's mother. Mother is the primary caregiver for the child in almost all societies across the world. Hence the health practices along with knowledge and attitude of the mothers directly implies on the health of the child. There are many pre determinant factors which imply on occurrence of acute diarrhoea diseases. Maternal education, socioeconomic classes also are the important factors. Hence this study is an attempt to find out the relationship between maternal education and socioeconomic status on knowledge, attitude and practice of mother and her child regarding acute diarrhoeal diseases.

#### Aim and objectives

The aim of the study is to find out the relationship between maternal education and socioeconomic status on knowledge, attitude and practice of mother and her child regarding acute diarrhoeal diseases. The objectives are to find out association between socioeconomic status with maternal knowledge, attitude and practice, to find out association of maternal education with child knowledge, attitude and practice, to find out association of maternal education with maternal knowledge, attitude and practice, to find out association mother's knowledge, attitude, practice and overall knowledge, attitude and practice with children's knowledge, attitude, practice and overall knowledge, attitude, practice and overall knowledge, attitude and practice.

# **METHODS**

# Design and settings

A community based cross sectional study at Azad higher secondary school of Kasegaon, Karad, Maharashtra.

# Study period

February 2013 to March 2013.

# Participants and sampling

All the 150 students belonging to 8<sup>th</sup> standard of the Azad higher secondary school.

# Exclusion criteria

The students who did not give consent were excluded from the study.

# Measures and measurements

A community based cross sectional study was carried out among the secondary high school children (8<sup>th</sup> std) Azad high school, Kasegaon to find out the relationship between maternal education and socioeconomic status on

knowledge, attitude and practice of mother and her child regarding acute diarrhoeal diseases. The mother was specifically selected for the study because she is primary caretaker of her children and her family. She is the one who spends maximum time with children and plays important role in inculcating health knowledge, attitude and practice in them. If the child had single parent i.e. father then the father would have been considered for the study but in current study no such child was found without mother.

A pre-structured and pretested questionnaire was used to get the information regarding definition, causes, signs, symptoms, treatment, preparation of ORS, prevention of diarrheal etc. A total of 12 questions were asked to assess knowledge, attitude and practice of acute diarhheal diseases of which 4 for knowledge, 4 for attitude and 4 for practice for children and in case of mothers 13 questions were asked to assess KAP of ADD of which 4 for knowledge, 5 for attitude and 4 for practice. Scoring system was developed to assess both pre and post test performance of study and control group. Correct answer was given score 1 and wrong answer and uncertain answer 0. The grading of knowledge, attitude and practice was done as 0-1= Poor, 2=Average and 3-4 =Good. The grading for overall KAP was done as 0-3=Poor, 4-7=Average, 8-12=Good. This was done in consultation with statistician and with the help of reference studies number 12.

Data was collected related to knowledge, attitude, practice on diarrhoeal diseases among 8<sup>th</sup> students and mothers in predesigned and pretested questionnaire. The mothers were interviewed personally. Institutional Ethical Committee clearance and permission from school was taken before the start of study.

#### **RESULTS**

Table 1 show that nearly 57% of the mothers had school education and 10% had college education and illiteracy was 36%. As per the occupation 46.6% were farmers, 30.6% were labours and 14% were housewives. Most of the families were belonging to middle class i.e. 64% and 20% to lower class and 16% to upper class.

Table 2 show that mother's education was significantly associated with children knowledge, attitude whereas practice was not associated. Illiterate mothers had significant poor knowledge and attitude. Majority of children whose mothers were illiterate had poor knowledge and attitude as compare to the children of educated mothers.

Table 3 show majority of mothers even having school education had poor knowledge, attitude and practice whereas illiterate mothers had poor knowledge, attitude and practice. The difference was found statistically significant.

Table 1: Distribution according to parent's education, occupation and socioeconomic status.

Particulars	Total N=150 (%)
Mother education	
1) Illiterate	54 (36)
2) School education	86 (57.3)
3) College education	10 (6.7)
Mother occupation	
1) Housewife	21 (14)
2) Farmer	70 (46.6)
3) Labour	46 (30.6)
4) Professional	13 (8.67)
Father education	
1) Illiterate	39 (26)
2) School education	84 (56)
3) College Education	27 (18)
Father occupation	
1) Farmer	90 (60)
2) Labour	46 (30.7)
3) Professional	14 (9.3)
Socioeconomic status	
1) Upper class	24 (16)
2) Middle class	97 (64)
3) Lower class	29 (20)

Table 2: Comparison of maternal education with child knowledge, attitude and practice.

	Knowledge (n=150)			Attitude (n=150)			Practice (n=150)		
	Poor	Avg	Good	Poor	Avg	Good	Poor	Avg	Good
Illiterate	23 (60.5)	14 (36.8)	1 (2.6)	35 (92.1)	2 (5.3)	1 (2.6)	29 (76.3)	7 (18.4)	2 (5.3)
School education	53 (52)	43 (42.2)	6 (5.9)	83 (81.4)	17 (16.7)	2 (2)	87 (85.3)	13 (12.7)	2 (2)
College education	4 (40)	3 (30)	3 (30)	5 (50)	5 (50)	0 (0)	0 (0)	0 (0)	10 (100)
X <sup>2</sup> value	10.390			11.995			4.108		
P value	< 0.05			< 0.05			0.392		

Table 3: Comparison of maternal education with maternal knowledge, attitude and practice.

	Knowledge (n=150)			Attitude (n=150)			Practice (n=150)		
	Poor (%)	Avg (%)	Good (%)	Poor (%)	Avg (%)	Good (%)	Poor (%)	Avg (%)	Good (%)
Illiterate	38 (100)	0 (0)	0 (0)	38 (100)	0 (0)	0 (0)	38 (100)	0 (0)	0 (0)
School education	65 (63.7)	18 (17.6)	19 (18.6)	87 (85.3)	12 (11.8)	3 (2.9)	93 (91.2)	6 (5.9)	3 (2.9)
College education	0 (0)	0 (0)	10 (100)	0 (0)	3 (30)	7 (70)	2 (20)	5 (50)	3 (30)
X <sup>2</sup> value	62.163			85.588			52.550		
p value	< 0.05			< 0.05			< 0.05		

According to Table 4, maximum numbers of mothers belonged to middle class socioeconomic status, had poor Knowledge, attitude and practice followed by the lower class. The difference was suggesting association between socio-economic status and KAP and was found statistically significant.

From the above Table 5 it is observed that the knowledge, attitude and overall KAP of children found significant associated with KAP of mothers while practice was not found statistically significant. The difference may be due to social and cultural practices followed at home without knowing the appropriate reasons behind it.

Table 4: Comparison of socioeconomic status with maternal knowledge, attitude and practice.

	Knowledge (n=150)			Attitude (n=150)			Practice (n=150)		
	Poor (%)	Avg (%)	Good (%)	Poor (%)	Avg (%)	Good (%)	Poor (%)	Avg (%)	Good (%)
Upper class	0 (0)	0 (0)	4 (100)	0 (0)	1 (25)	3 (75)	1 (25)	2 (50)	1 (25)
Middle class	67 (62.6)	16 (15)	24 (22.4)	86 (80.4)	14 (13.1)	7 (6.1)	93 (86.9)	9 (8.4)	5 (4.7)
Lower class	36 (92.3)	2 (5.1)	1 (2.6)	39 (100)	0 (0)	0 (0)	39 (100)	0 (0)	0 (0)
X <sup>2</sup> value	28.950			41.183			21.481		
P value	< 0.05			< 0.05			< 0.05		

Table 5: Comparison of mother's knowledge, attitude, practice and overall KAP with children's knowledge, attitude, practice and overall KAP.

Mother (KAP)	Poor	Average	Good	χ² value	P value	
Children knowledge						
Poor	51 (63.8)	13 (16.3)	16 (20)	_		
Average	49 (81.7)	5 (8.3)	6 (10)	23.012	0.000	
Good	3 (30)	0 (0)	7 (70)			
Attitude						
Poor	110 (89.4)	10 (8.1)	3 (2.4)		0.000	
Average	12 (50)	5 (20.8)	7 (29.4)	29.118		
Good	3 (100)	0 (0)	0 (0)			
Practice						
Poor	111 (81.1)	9 (7.1)	6 (4.8)		0.790	
Average	18 (90)	2 (10)	0 (0)	1.703		
Good	4 (100)	0 (0)	0 (0)			
Overall KAP						
Poor	75 (72.8)	27 (26.2)	1 (1)			
Average	28 (59)	11 (23.4)	8 (17.6)	14.781	0.001	
Good	0 (0)	0 (0)	0 (0)	_		

#### **DISCUSSION**

Generally the mother is the primary caretaker of the family and is thus charged with teaching her children proper health and hygiene practices. An illiterate or uneducated mother even though she takes care of her family, she may be less knowledgeable about teaching her children proper hygienic practices, subsequently leading to increased rates of infection and disease amongst her children.

According to age group and gender, mean age of 8<sup>th</sup> standard students was 13 yrs (range: 12-14). Majority of them were boys constituting 74.7% whereas only about 1/4<sup>th</sup> girls population i.e. 25.3%. In study of Magalhães et al, students from the 5th and 8th grades were participants of study.<sup>6</sup> Mean age was 10 years (range: 9-14) in the 5<sup>th</sup> grade and 14 years (range: 13-17) in the 8th grade. And 46.8% were boys and 53.2% girls. As in current study there was no difference in study as well as control group. In study of Savitha et al, reported illiteracy among mothers of 63.46% of study subjects and very less proportion of mothers with school and college education among study subjects.<sup>7</sup> Whereas Haroun et al observed less proportion of maternal illiteracy (13.2%) among study subjects while as Broor et al observed more

proportion of maternal illiteracy (42.6%).<sup>8,9</sup> In current study, more than 1/3<sup>rd</sup> mothers were illiterates ie 36% and 58% were literates. This different observation may be existed due to different of study setting.

Regarding maternal occupation, majority of mothers were farmers and labourers whereas only minimum proportion were housewives & professionals in both groups. In Angela study, 11% of mothers of children in an agriculture work, 3.36% on daily based labour, 1.68% domestic work for others, 85.71% were housewife. <sup>10</sup>

In socioeconomic status using modified B.G. Prasad classification, Maximum families in study belong to middle class followed by lower class and upper class. Ramesh puri and Mehta reported that 66.4% belonged to lower class, 23.8% belong to middle class and 9.6% belong to upper class. The different observation is due to different study setting. In the current study it was noted that mother's education had significant association with children knowledge and attitude (p<0.05) but was not associated with practice (p>0.05). Mother's education was compared with their KAP & observed significant association (p<0.05). Seter Siziya et al conducted study on Diarrhoea and acute respiratory infections prevalence and risk factors among under-five children in Iraq in

2000 which showed significant association between maternal education and maternal socioeconomic status with prevalence of diarrhoea and ARI (AOR=1.11, 95%CI [1.04, 1.18]). 12 Ibrahim et al in a 3 year demographic surveillance observed, under 5 mortality from diarrhoea in children of illiterate mothers was more in comparison with literate mothers. 13 The findings suggest that the use of ORT is associated with a mother's ability to allocate time to health care and her general position in the household and also maternal illiteracy and ignorance are responsible for difference in under-5 mortality. All observations indicate that mother's education is associated with child health as well as children's knowledge, attitude and practice. Lloyd, Angela reported that the baseline scoring on acute diarrhoeal diseases, the literate mothers already had knowledge, attitude and practice. 10 Hence the risk of acute diarrhoeal diseases was less in their children as compared to illiterate mothers among whom risk was high.

Socioeconomic status was found significantly associated with mother knowledge, attitude and practice. Those belonging to upper class had good knowledge, attitude and practice as compared to those belonging to middle and lower class similarly mother's Knowledge, attitude, practice was significantly associated with child's knowledge, attitude and overall KAP, while mother's practice was not associated with child's practice. This difference might be due to social and cultural factors which have been followed in the family. Siziya et al also showed that poor socioeconomic status was associated with incidence of diarrhoea. Datta et al observed that the incidence of diarrhoea was found to be more among low socioeconomic status as compared to upper class. The results were similar to the current study

#### **CONCLUSION**

Maternal education and maternal socio economic status has important role is ascertaining the knowledge, attitude and practice of her children regarding acute diarrhoeal diseases.

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Ethical approval: The study was approved by the

Institutional Ethics Committee

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