



Self Medication and Associated Health Care Seeking Amongst Mothers of Children Aged Under 5 with Diarrhea and Respiratory Tract Infections in an Urban Slum

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ABSTRACT

Introduction: Self-medication practice in childhood illnesses is quite common in developing countries. Self-medication practices are found to be influencing healthcare seeking behavior in developing countries. **Aims & Objectives:** To assess self-medication practices and its association with health care seeking in mothers of children aged under 5 with diarrheal and respiratory illness episodes residing in an urban slum. **Place and duration of study:** A cross-sectional analytical study conducted in Samsani-khui, an urban slum in district Lahore, from September 2016- February 2017. **Material & Methods:** 422 mother-child units (only one child aged under 5 years) were recruited through systematic random sampling. Responses were recorded on a structured, self-constructed questionnaire about self-medication practices of mothers for the selected child during last 6 months in acute episodes of diarrhea or respiratory illness. Data was entered and analyzed on SPSS version 21. Fisher's exact test was applied. **Results:** Mean age of mothers was 26.81 ± 4.744 years, 16% were illiterate, 44.3% had attained primary education and 92.65% were housewives. 70.62% children included in study were boys. 61.8% mothers never practiced self-medication in their child whereas 38.2% administered medicines occasionally, frequently or every time the child got ill. 92.5% of the mothers practicing self-medication admitted that self-medication is responsible for delay in health care seeking. Out of these mothers, 59% sought formal health care without delay for their child suffering from diarrhea or RTI during last 6 months. 70.8% children recovered completely after practicing self-medication, as reported by mothers. While 23.0% reported late recovery, 3.1% reported complications and 3.1% reported hospitalization after self-medication. A highly significant association was found between practice of self-medication and health care seeking behavior ($p=.001$). **Conclusion:** Practice of self-medication is present in one third of mothers of low income, literacy poor families. Mothers of this stratum showed poor perception about self-medication and as well as treatment delay. Self-medication practice strongly affects health care seeking behavior.

Key words: Self-medication, Healthcare seeking behavior, Children, Diarrhea, Respiratory tract infection

INTRODUCTION

Health care seeking is usually divided into: "informal health care seeking" and "formal health care seeking". In "informal healthcare seeking" medicine is taken on the advice of parents, a friend, a trusted person or members of social network. Whereas in "formal health care seeking" professional consultation is done from a health care service provider for e.g., physician, psychologist

etc.¹ Poor or delayed health care seeking is greatly responsible for increased mortality in children aged under 5.² Health care seeking behavior is dependent upon the availability of health care facility in an area and also on the motivation of caretakers for seeking formal health care services.³ It is documented that improved knowledge of caretakers about their child's health and epidemiology of these two diseases i.e., diarrhea and RTI may result in decreased mortality of children aged under 5.⁴ As estimated by World Health Organization timely

health care seeking can cause reduction of child mortality due to RTI by 20%.⁵ It is commonly observed that children with less severe symptoms are managed at home.⁶ Encouraging people for appropriate health care seeking behavior can reduce morbidity and mortality in a population.⁷ Education of caretakers, severity of illness as perceived by caretakers are found to be strong factors for appropriate health care seeking behavior.⁸

Appropriate health care seeking from a health care professional is more in mothers of infants as compared to mothers whose children were older.⁹ It is found that once decision was made to seek professional help, the choice of taking the child to public or private sector is dependent on economic status and size of the family.¹⁰ Health care seeking behavior is dependent upon perceived severity of symptoms.¹¹ It is suggested that interventions should be made to discourage trend of using inappropriate and harmful drugs in young children.¹²

Communities with low-income groups and literacy poor families are more prone to perceive wrongly and practice self-medication on their children. It is postulated that self-medication delays health care seeking. Therefore, aim of this study was to assess self-medication practice and its influence on health care seeking in mothers of children aged under 5 with diarrheal and respiratory illness episodes residing in an urban slum.

MATERIAL AND METHODS

It was a cross-sectional analytical study conducted in Samsani-khui, an urban slum, for convenience in accessibility. It is located in Union Council 120, Johar Town, District Lahore. It has a total population of 5200. Female population is approximately 2600, considering 45% (1170) in child bearing age with high probability of having at least one child aged under 5, minimum number of mothers with such children were calculated to be around 1000.

Permission for the study was taken from Institutional Review Board of Shaikh Zayed Medical Complex, Lahore. Mothers having at least one child under 5 years were recruited in the study after taking written informed consent. A structured questionnaire was filled for identifying self-medication practice of mothers in episodes of diarrheal and respiratory tract infections (RTI) during the last 6 months and their associated health care seeking behavior. In mothers having more than one child aged under 5, the youngest one was included. Mothers who did not play active part in their child's health, who were health care workers or

children who had chronic diseases were excluded from the study.

Assuming that 50% mothers had delayed health care seeking behavior (p), Z is set as (1.96) at 95% confidence level and desired precision of 0.05, so 384.10% was added for the possibility of non-response and the final sample size was 422.

Variables: Self-medication in children aged under 5 means "the selection and use of medicines by their mothers for the treatment of self-diagnosed ailments of these children, it includes home remedies, drugs given on advice of member of social network (friend, neighbor, grandparents etc), drugs given by any pharmacist/compounder, left over drugs or taking them to spiritual healers, hakeem or homeopath". Frequency of self-medication was calculated by assessing these practices in last 6 months in diarrheal and respiratory illness episodes. Health care seeking is the treatment taken from health care service providers (physician). Delayed health care seeking was defined as, "if it takes more than 3 days for a mother to take her child for consultation (self-reported) for diarrheal or respiratory tract infections". Health seeking behavior (HSB) was divided into 1-3 days i.e., timely HSB and 4-7 days i.e., delayed health care seeking behavior.

Children with moderate to severe diarrhea as reported by mother included children in whom signs of dehydration were observed by mothers such as dry tongue, sunken eyes, irritability or presence of fever. Similarly children who had moderate to severe RTI were included in the study, with symptoms such as cough with sputum, fever, difficulty in breathing, vomiting, and inability to feed or drink.

Health care seeking behavior was a dependent variable and self-medication practice was taken as independent variable.

Statistical analysis:

The data was entered and analyzed on SPSS version 21. Frequency and percentage of self-medication was calculated. Self-medication was cross tabulated with timely or delayed health care seeking behavior and Fisher's exact test was applied.

RESULTS

The results of this study showed that the mean age of mothers was 26.81 ± 4.744 years, education level of mothers was assessed showing that 67 (16%) of them were illiterate, 187 (44.3%) had attained primary education, 102(24.1%) attained education till middle, 65(15.4%) of women did matric and

only 1(0.2%) did intermediate. Occupation of mothers was asked and it was found that 391 (92.65%) of mothers were housewives while only 31 (7.35%) were doing jobs. Amongst the children included in the study 298(70.62%) were boys and 124 (29.38%) were girls (Table-1).

261 mothers (61.8%) reported that they never practiced self-medication, 150 (35.6%) did so occasionally, 9 (2.1%) did practice self-medication frequently and only 2 (0.5%) did it every time the child gets sick depending upon the severity of symptoms as perceived by them (Table-2).

Out of the mothers who admitted that they did practice self-medication (N=161), 149 (92.5%) agreed that self-medication is responsible for delay in health care seeking while the rest 12(7.5%) did not agree (Table-3).

Of the mothers practicing self-medication results showed that 95 (59%) of the mothers sought formal health care within 3 days of illness which showed that there was no delay in seeking treatment in children aged under 5 who were suffering from diarrhea or RTI whereas 66 (41%) of mothers delayed health care seeking as a result of self-medication, the association found was highly significant (Table-4).

Outcome of the practice of self-medication was also recorded which showed that 114 (70.8%) of the children recovered completely, 37 (23.0%) had late recovery, 5 (3.1%) suffered from complications and 5 (3.1%) were hospitalized (Table-5).

Socio-demographic factors of mothers		
Age in years	Frequency	Percentage
15-20	9	2.1
21-25	25	5.9
26-30	301	71.4
31-35	74	17.5
36-40	10	2.4
41-45	3	0.7
Education		
Illiterate	67	16
Primary	187	44.3
Middle	102	24.1
Matric	65	15.4
Intermediate	1	0.2
Occupation of mothers		
Working	31	7.35
House wives	391	92.65
Gender of child		
Male	298	70.62
Female	124	29.38

Table-1: Descriptive statistics of socio-demographic factors of mothers of children aged under 5.

		Frequency (n=422)	Percentage (%)
Self-medication practiced	Never	261	61.8
	Occasionally	150	35.6
	Frequently	9	2.1
	Every time the child gets sick	2	0.5

Table-2: Frequency of practicing self-medication

		Frequency (n=161)	Percentage (%)
Self-medication is responsible for delayed health care seeking behavior	Yes	149	92.5
	No	12	7.5

Table-3: Self-medication responsible for delayed health care seeking.

		Self-medication		Total	(p-value)
		Yes	No		
Self-medication and delay in health care seeking	No delay.	95	257	352	<0.00001
		59%	98.5%	83.4%	
Delayed health care seeking.		66	4	70	
		41%	1.5%	16.6%	
Total		161	261	422	
		100%	100%	100%	

Table-4: Association of self-medication and health care seeking behavior.

		Frequency (n=161)	Percentage (%)
Outcome of practicing self-medication	Child recovered completely	114	70.8
	Delayed recovery	37	23.0
	Complications developed.	5	3.1
	Hospitalization required.	5	3.1

Table-5: Outcome of practicing self-medication.

DISCUSSION

In our study mean age of mothers was found to be twenty-six years, although most of the mothers denied using self-medication in their young children but the ones who admitted doing this practice i.e., thirty-eight percent could not be ignored. Ninety-two percent of these mothers agreed that this

practice of self-medication leads to delay in professional health care seeking. Diarrhea needs medical care if it lasts for more than three days.¹³ Pneumonia is also fatal after three days of illness.¹⁴ Results of a study showed that only twenty-seven percent of mothers sought formal medical help within 2 days of onset of severe diarrhea.¹⁵ Another study showed seventy-two percent of mothers sought timely treatment from health care facilities for their sick children.¹⁶ Timely health care seeking was found in a study from Africa and Asia, to range from 15-56% in 0-11 months age children, 12-23 months it was 17-64%, in 24-59 months it was 7-33%.¹⁷ In our study, ninety-two percent of the mothers practicing self-medication agreed that this practice is responsible for delay in health care seeking. This shows how much prevalent this self-medication practice is in developing countries especially and we can find this consistently in literature being associated with delay in seeking care for children.

A study conducted in Gambia showed only forty-eight percent of children aged under 5 suffering from diarrhea were taken to a health care center. Developing appropriate health care seeking behavior and promoting use of evidence supported household remedies can help to reduce morbidity and mortality.⁷ The results of a study done in Yemen revealed that medical care was sought only for fifty-one percent of children with these acute illnesses.⁸ Health care seeking was better in parents who recognized the danger signs of diarrhea and were educated.¹⁸ These studies are emphasizing how much we need formal health education of mothers regarding the health of their children. This could be started in the antenatal period.

Forty-one percent of the participants of our study reported delayed health care seeking as a result of self-medication. A study conducted in Kenya showed that appropriate health care seeking from a health care professional was more in mothers of infants as compared to mothers whose children were older. This study also showed that mothers sought treatment earlier in case of diarrhea than coughing.¹³ Factors found to be associated with child mortality were quick switching of healers by mothers, traditional healers, quacks, doctors not properly explaining child's condition to mothers. Mothers being the prime caregiver for children under 5, so they should be educated properly as to how they can treat minor illnesses and recognize danger signs in children suffering from diarrhea and ARI.¹⁹ A study conducted in China showed that poor knowledge about antibiotics leads to high level of use in children by their parents.²¹ Health care seeking

behavior is dependent upon perceived severity of symptoms.¹¹ The results of another study also indicated that mothers of children aged under 1 year, mothers who had less number of children or had healthy children showed better health care seeking behavior.²⁰ So mothers should be taught about the recognition of danger signs of these common illnesses for timely care seeking and avoiding self-medication.

An obvious delay is seen in healthcare seeking behavior as mothers go through different options in their young children.²² It is proposed that health education programs addressing importance of timely health care seeking in children aged under 5 should be organized.²³ Accessible and responsive health services should be provided for the community.²⁴ A study conducted in Nigeria confirmed the relation of self-medication with delay in health care seeking behavior.²⁵ The findings of the above mentioned studies are in accordance to the results of our study revealing a strong association between practice of self-medication and health care seeking behavior.

Outcome of the practice of self-medication as reported by mothers of this study showed that almost 71% percent of the children recovered completely, 23% showed late recovery, 3% suffered from complications and 3% were hospitalized. This development of complications and need of hospitalization is alarming for mothers as well as for health care providers. Another study also suggested that interventions should be made to discourage trend of using inappropriate and harmful drugs in young children.¹² Self-medication is a harmful practice as concluded by previous literature. Our study findings are consistent with this, showing self-medication as a prevalent practice with high frequency of poor outcomes. Self-medication is found to be statistically associated with the care seeking behavior (p-value <0.001).

This study had its own limitations as was conducted only in one area so the results cannot be generalized on the whole population. Chances of recall bias cannot be overlooked. As this study was cross-sectional therefore it precludes the assessment of self-medication by seasonal patterns. Only the pattern of self-medication in last episode of illness was recorded. Cause and effect relationship could not be established between the variables due to cross-sectional study design. As the analysis was based on self-reporting therefore chances of over or under reporting by mothers cannot be ignored. Therefore, it is suggested that in future multi-center studies with or without cohort design may be conducted. Practice of self-medication could be compared in urban and rural population as well.

CONCLUSION

Practice of self-medication is a prevalent practice in mothers belonging to low income and illiterate families. These mothers perceive and practice self-medication being beneficial but resulting in treatment delay. Self-medication is found to be more in children with treatment delay. Proper policy and planning is required to educate mothers about advantages of timely health care seeking.

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