

**Healthcare-Seeking Behaviors of Mothers regarding their Children in a Tribal Community of Gujarat, India**Haresh Chandwani¹, Jyotsna Pandor²¹Associate Professor, Department of Community Medicine, GCS Medical College, Ahmedabad, Gujarat, India²Associate Professor, Department of Community Medicine, GMERS Medical College, Patan, Gujarat, India**Type of article:** Original**Abstract**

Background: The mortality and morbidity from the diseases which contribute to the deaths among children can be reduced if early intervention is made in terms of appropriate care and treatment. Thus, utmost care should be taken to prevent diseases, recognize the danger signals, and treat them urgently. Thus, healthcare-seeking behavior is of prime importance and is pivotal in the well-being of the individual as well as the community. The aims of this research were to determine the possible factors that affect the healthcare-seeking behavior of mothers for their children in a tribal community of Narmada district and to determine the reasons for not seeking curative care for children who are perceived to be sick.

Methods: A cross-sectional, community-based study of 405 mothers of the Dediypada Block in Narmada District Gujarat, India, was undertaken, using a two-stage, cluster-sampling technique. The study was conducted from June through August 2011 using the questionnaire method. The chi squared test was used to determine the association between various factors and the healthcare-seeking behaviors of mothers.

Results: The mothers were in the age range of 17 to 44 years, with the mean (+SD) being 26.2+3.2 years. Ninety-one percent of the children, irrespective of gender, had completed their primary immunization. Regarding curative healthcare-seeking behavior, 16.5% of the males and 42% of the females received no treatment. Joint family structure ($P<0.05$, $df=1$, $\chi^2=41.39$), mass media exposure ($P<0.05$, $df=1$, $\chi^2=16.42$), literacy status ($P<0.05$, $df=1$, $\chi^2=60.76$), socioeconomic status of the mothers ($P<0.05$, $df=1$, $\chi^2=56.08$), and gender differences among children ($P<0.05$, $df=1$, $\chi^2=21.18$) were found to be associated significantly with the healthcare-seeking behavior of the mothers.

Conclusion: Increased maternal education, generation of intensified awareness through the mass media approach, implementing gender-sensitive interventions, and counseling may have positive implications in the future, leading to better health outcomes and favorable health indicators.

Keywords: gender differences, healthcare-seeking behavior, mothers

1. Introduction

In 2012, approximately 6.6 million children under the age of five died worldwide. Diseases such as pneumonia, diarrhea, and malaria accounted for 33% of these deaths. These diseases take a huge toll on the children's physical and cognitive abilities (1-3). Deaths from these diseases can be prevented if timely treatment is initiated (4). Thus, utmost care should be taken to prevent diseases, recognize the danger signals, and treat them urgently. Thus, healthcare-seeking behavior is of prime importance and is pivotal to the well-being of the individual child as well as the community (5). The process of responding to perceived 'illness' or seeking care involves multiple steps. Therefore, it is important for caregivers to be able to identify these childhood diseases and seek timely treatment for them, which can help to reduce the mortality rate of children under the age of five in third world countries and to

Corresponding author:

Associate Professor, Department of Community Medicine, GCS Medical College, Ahmedabad, Gujarat, India. Tel: +91.9428420967, Email: harsh1012@yahoo.co.in

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achieve the Millennium Development Goal 4(MDG 4) target of reducing the mortality rate of children by 67% by 2015(6).

The World Health Organization (WHO) and United Nations Children's Fund (UNICEF) have acknowledged the importance of seeking early care, and they developed the strategy called 'Integrated Management of Childhood Illness' (IMCI), which emphasizes appropriate family and community health practices are crucial for improving the health status of children and decreasing childhood mortality in the majority of developing countries (4). WHO's and UNICEF's 'Global Action Plan for the Control of Pneumonia and Diarrhea' also has pointed out the importance of caregivers' ability to recognize and seek appropriate care for their children (5). In addition, the identification of barriers to seeking healthcare and to access to healthcare have been accorded the highest priority for research by WHO as a part of its exercise in which research priorities are set by using the methodology of the 'Child Health and Nutrition Research Initiative (CHNRI)' (6).

Mothers in developing countries often do not have sufficient knowledge to be able to recognize danger signs regarding their children's health. They do not have adequate information concerning access to appropriate health services or what the appropriate treatment should be (7). A woman's decision to seek healthcare is not an isolated event; rather, it is a composite result of her personal needs, social forces, actions of healthcare providers, and the location of services (8). A holistic framework was developed by Kroeger (9) that encompasses the major dimensions of healthcare-seeking behavior, and the framework is useful for assessing healthcare-seeking behavior in developing countries.

Healthcare-seeking behavior has emerged as a tool to tackle perceived ill health by taking remedial actions, and, currently, a lot of efforts are being directed toward encouraging people to learn and use health-promoting behaviors (3). In patriarchal systems, such as those that dominate most of India, the situation is more ominous than the dismal data would indicate, because it is compounded by unemployment, illiteracy, and firmly-held cultural beliefs (4). With the advent of the new era, the education of females has come out of its domestic confinements and has become an important factor in the public health agenda. Another concern in a developing country, such as India, is to ensure that gender equity prevails in the utilization of healthcare facilities, because gender bias and gender discrimination lead to depriving women of the power to make decisions, which also translates into health disparities and inadequate utilization and access to healthcare services (10).

Thus, this study was envisaged because there is a dearth of literature on the issues associated with healthcare-seeking behaviors of mothers in third world countries. Medical services are inadequate in the remote tribal areas, and the perception of mothers regarding the sickness of their children and their healthcare-seeking behaviors are unknown. The objectives of the study were to determine the possible factors that affect the healthcare-seeking behavior of mothers with regard to their children in a tribal community of the Narmada district of Gujarat and to determine the reasons the mothers do not seek curative care when they perceive that their children are sick.

2. Material and Methods

2.1. Study setting

This study was conducted in the Narmada district, a tribal district of Gujarat state in India. A community-based, cross-sectional study was conducted from June 2011 through August 2011 in the Dediypada Block of Narmada district, which comes under the Department of Community Medicine, Medical College, Vadodara, for monitoring and supervision of public health activities.

2.2. Sampling

The 2-stage, cluster sampling method was used to select the village since our plan was to conduct a community-based survey that involved household visits. Systematic random sampling was used to select the households. With the help of community health workers, a village-wide list of mothers (pertaining to the inclusion and exclusion criteria) was prepared, and 368 mothers were eligible. The final sample size was calculated to be 405, taking into account the no-response rate of approximately 10%.

2.3. Data collection

Mothers who were permanent residents of the area, not severely ill, had a child with perceived sickness in the recall period, and were willing to participate were included in the study. Mothers whose youngest child was older than five were excluded from the study. The healthcare-seeking behavior of the mother was recorded for cases in which she

perceived that her child was ill. A recall period of one month was used to avoid any recall bias. Healthcare-seeking behavior for perceived illness was recorded for only one child per mother (preferably the youngest child). The study was conducted by going house-to-house for visits with the help of the peripheral health workers, such as Accredited Social Health Activists (ASHAs) and Auxiliary Nurse Midwives (ANMs). Data were collected using a pre-designed, pre-tested, semi-structured, open-ended, and validated schedule. The in-depth interview method was conducted as required.

Operational definitions of literacy (any person over seven years of age who could read and write with complete understanding) and healthcare-seeking behavior (from both preventive and curative perspectives) were used. The variables used in the study were the working status of the mother, the mother's exposure to mass media (including television, radio, newspaper, and group meetings), the mother's educational and socio-economic status, the type of family structure where the mother lived, and the gender of the child. We studied the healthcare-seeking behaviors of the mother, from both preventive and curative perspectives, and the reasons for not seeking curative care at all.

2.4. Ethical consideration

The benefits of the study were explained to the mothers in the study area, and they were asked to sign informed consent forms. The requisite permission and ethical clearance were obtained from the Institutional Ethical Committee of Medical College, Vadodara, Gujarat. The ethical consideration that was taken into account consisted of obtaining informed consent forms from the participants.

2.5. Statistical analysis

The data were compiled and analyzed by percentages and proportions, and the chi squared test was used to determine the association between variables using SPSS version 11.

3. Results

Among the 405 mothers in the study ($n = 405$), the age range was from 17 to 44 years, with the mean (\pm S.D) being 26.2 ± 3.2 years. Two hundred and eighty-eight were Hindus (71.1%), 47 were Muslims (11.6%), and 70 belonged to other religions (17.3%) (Table 1). There were 252 mothers (62.2%) who belonged to the general caste, and 153 (37.8%) belonged to Scheduled Caste (SC)/Scheduled Tribe (ST)/Other Backward Class (OBC) SC/ST/OBC. Among the children of the 405 mothers, 224 were males (55.3%) and 181 were females (44.7%) (Table 1). During the study period, the total number of children below the age of one year (infants) was 69 (17%), the ages of the remaining 336 of the children (83%) ranged from one and five years. The results indicated that 91% of the males and females had completed their primary immunization coverage. Thus, preventive healthcare-seeking behavior was practiced by almost all the mothers, which was a welcome finding.

Regarding the curative aspect of healthcare-seeking behavior, among a total of 224 male children, no treatment was received in 16.5% of the cases (37 males). Treatment at the public sector was received by 68.3% of the cases (153 males), and treatment in the private sector was received by 15.2% of the cases (34 males). This indicated the promptness, concern, and utmost care for their male children by the mothers (Table 2). However, the equality in seeking preventive healthcare services, such as immunization coverage, among mothers for their children of both genders, was not reflected in the case of curative healthcare-seeking behavior. Among the 181 female children, strikingly, there was no treatment received in 42% of the cases. Treatment in the public sector was received in 44.8% of the cases (81 females), and treatment in the private sector was received by 13.2% of the cases (24 females) (Table 2). The findings of the chi squared test are provided in Table 3. Mass media exposure was categorized as 'not exposed' and 'exposed.' Of the 44 mothers (10.8%) not exposed, healthcare was sought by only 21 mothers (47.7%), and among the 361 mothers (89.1%) exposed to mass media, 249 mothers (69%) sought healthcare. The association was found to be statistically significant. ($P < 0.05$, $df = 1$, $\chi^2 = 16.42$). The working status of the mother was categorized as 'non-working' or 'working.'

Among the 281 (69.4%) non-working mothers, 155 (55.2%) had healthcare-seeking behavior. Among the working mothers, 54.8% had healthcare-seeking behavior. No statistically significant association was found ($P > 0.05$, $df = 1$, $\chi^2 = 0.00$). The educational status of the mother was categorized as 'literate' or 'illiterate.' Of the 98 illiterate mothers, 24.5% had healthcare-seeking behavior, whereas, among the 307 (75.8%) literate mothers, 78.3% had healthcare-seeking behavior. The association was found to be statistically significant ($P < 0.05$, $df = 1$, $\chi^2 = 60.76$).

The mothers were categorized again as 'Below Poverty Line (BPL) card holders' and 'non-holders.' Among 307 (75.8%) BPL card holder mothers, 239 (77.9%) displayed healthcare-seeking behavior, whereas, among 98 non-BPL mothers (24.2% cases), 25 (25.5%) sought healthcare services. A statistically significant association was noted. ($P < 0.05$, $df = 1$, $\chi^2 = 56.08$). Among 280 mothers (69.1%) living in joint families, 24.6% had healthcare-seeking behavior, whereas, among 125 mothers (30.9%) living in nuclear families, 67.2% sought healthcare. The association was found to be statistically significant ($P < 0.05$, $df = 1$, $\chi^2 = 41.39$). The association between the healthcare-seeking behavior of the mothers and gender of their child was found to be statistically significant. Among the 224 mothers who had a male child, 83.9% sought healthcare services, whereas, among the 181 mothers who had a female child, 58% sought healthcare ($P < 0.05$, $df = 1$, $\chi^2 = 21.18$).

Table 1. Distribution of respondents according to socio-demographic characteristics*

Characteristics		Frequency (%)
Age of mothers (years)	< 20	88 (21.7)
	20–29	235 (58)
	25–39	74 (18.3)
	40–49	8 (2)
Religion	Hindu	288 (71.1)
	Muslim	47 (11.6)
	Other	70 (17.3)
Education status of mother	Illiterate	98 (24.2)
	Literate	307 (75.8)
Occupation of mother	Working	124 (30.6)
	Non-working	281 (69.4)
Type of family	Nuclear	125 (30.9)
	Joint	280 (69.1)
Age of child (in years)	<1	69 (17)
	1-5	336 (83)
Gender of child	Male	224 (55.3)
	Female	181 (44.7)
Mothers having BPL card	Yes	307 (75.8)
	No	98 (24.2)

* (n = 405)

Table 2. Distribution of children according to type of curative healthcare received (Figures in parentheses indicate percentage.)

Curative health-seeking behaviour	Perceived sick, males (n = 224)	Perceived sick, females (n = 181)	Total perceived sick, children (n = 405)
No treatment	37 (16.5)	76 (42)	113 (27.9)
Treatment at public sector	153 (68.3)	81 (44.8)	234 (57.8)
Treatment at private sector	34 (15.2)	24 (13.2)	58 (14.3)

Unfortunately, out of the 405 mothers, each of whom had a child that was perceived to be sick, healthcare behavior was not evident in 27.9% of the cases. Among the 224 male and 181 female children, no treatment was received in 16.5% and 42% of the cases, respectively. The reasons stated by their mothers for not seeking healthcare were

noted. Multiple responses were given, i.e., 81.2% of the mothers opined that ignorance, lack of awareness, firmly-fixed cultural beliefs, male-dominated society, more concern for the well-being of the male child (as the future bread winner of the family), and the final word of the head of the family were contributing factors; 56.8% of the mothers stated the cause to be dissatisfaction with the healthcare services, along with the lack of accountability and humaneness of the healthcare providers. Lack of accessibility, availability, and affordability of the healthcare services also was a cause, according to 68.3% of the mothers. According to 23.4% of the mothers, the inconvenience of transportation facilities, religious misinterpretations, socioeconomic constraints, and women's restricted movements were factors.

Table 3. Possible factors associated with the healthcare-seeking behavior among mothers ($n=405$) (Figures in parentheses indicate percentage)

Factors	Category	Health-seeking behavior n(%)		X ² value, P value, df	Odds ratio (OR) (95% CI)
		Yes	No		
Mass media exposure	Present	249 (69)	112 (31)	16.42, 0.00, 1 (Significant association)	OR=5.29 (2.07-13.88)
	Absent	21 (47.7)	23 (52.3)		
Working status of mothers	Working	68 (54.8)	56 (45.2)	0.0, 0.99, 1 (not significant)	OR=1 (0.56-1.76)
	Not working	155 (55.2)	126 (44.8)		
Educational status	Literate	241 (78.5)	66 (21.5)	60.76, 0.00, 1 (Significant association)	OR=11.34 (5.5-23.62)
	Illiterate	24 (24.5)	74 (75.5)		
Type of family	Nuclear	84 (67.2)	41 (32.8)	41.39, 0.00, 1 (Significant association)	OR=0.16 (0.09-0.30)
	Joint	69 (24.6)	211 (75.4)		
Mothers having BPL card	Yes	239 (77.9)	68 (22.1)	56.08, 0.00, 1 (Significant association)	OR=10.10 (4.9-20.73)
	No	25 (25.5)	73 (74.5)		
Mothers according to gender of child	Male	188 (83.9)	36 (16.1)	21.18, 0.00, 1 (Significant association)	OR=3.76 (2.03-7.02)
	Female	105 (58)	76 (42)		

4. Discussion

The multi-dimensional growth of a nation is primarily dependent on its health, peoplepower, and effective utilization of services, and it extends beyond the narrow limits of curative care, encompassing the preventive and promotive aspects as well (11, 12). For effective health outcomes, it is mandatory that women utilize the services on a par with men, perhaps even to a greater extent because they are the prime caregivers to the children in the community. Starting from immunization coverage to accessing curative healthcare, healthcare-seeking behavior largely displays the needs felt and awareness generated in the individual as well as the community. The available data on healthcare-seeking behavior depicts under utilization of healthcare services by female children (13, 14). However, there are inadequate data regarding gender bias prevailing in terms of the recognition of illness at the household level, money spent for health services, and the type of care given, all of which hinder the task of making gender-sensitive policies (15, 16). Since this study was conducted in a tribal area, the perception and willingness of mothers towards participating in this study were doubtful, and, therefore, a no-response rate of approximately 10% occurred in this study.

Community-based studies conducted in rural and tribal India have documented significant gender bias in the utilization of healthcare, where in 52.8% of sick male newborns and 24.3% of sick female newborns receive treatment (17, 18). The studies conducted in Bangladesh and Pakistan also provided similar results, i.e., boys were more likely to get even free treatment than girls (19, 20). The findings of our study were in accordance with a study conducted in the western part of India, in which girls under three years of age received less medical care than boys in the same age group (21). The studies conducted among private practitioners and care providers of Bangladesh and Nepal also have reported discriminatory care-seeking for girls and boys (22, 23). Regional and gender differences in the healthcare-seeking behavior were observed in studies conducted in the southern areas of India (24). The mother's education has a strong and positive influence on the utilization of child healthcare services, as indicated by a study conducted by Shaikh et al. (25). The children in the age group of six to twenty-three months, children living in urban areas, children of lower birth orders, children of mothers with at least secondary education and exposed to any sort of mass media have more access to medical facilities (19). The determination of healthcare-seeking behavior is governed by the interplay of many factors, such as women's ages, education, religion, ethnicity, culture, decision-making power, place of residence, and socio-economic status, as well as the cost, quality, and location of healthcare services (26, 27). Another study indicated that mothers were not adequately equipped with knowledge to be able to perceive neonatal illness serious enough to consult a healthcare provider (28).

However, a responsible, productive, and competent healthcare workforce is an essential prerequisite for effective and favorable health outcomes (29). Sadly, the healthcare of people in rural areas has yet to reach reasonable standards. The prevalence of infant mortality is 250% greater, the prevalence of malaria is 300% greater, and malnourishment among the reproductive-age females is 300% greater in the rural population than in the urban population (30). However, illiteracy, ignorance, lack of awareness of the necessity of the services provided, customs, beliefs, deep-rooted faith in traditional healers and Traditional Birth Attendants (TBAs), lack of accountability of healthcare providers, lack of credibility of public health facilities, concern over cost of medicine, reputations of healthcare providers, and access to a healthcare provider (covering geographical, socioeconomic, and gender distances) act as hindrances in the effective service utilization by the beneficiaries (30, 31). Recall bias may also lead to inaccurate or underestimation of the healthcare-seeking behavior for newborns. Another bias is the misclassification bias, which occurs because mothers may misrepresent their actual situation to create a more socially-desirable impression (32).

5. Conclusions

Factors such as mass media exposure of mothers, literacy status of mothers, below poverty line card holder mothers, and those residing in joint family structures were found to be significantly associated with the healthcare-seeking behavior of the mothers. Association between healthcare-seeking behavior of mothers and gender of their child also was found to be statistically significant. A majority of the mothers opined that ignorance, lack of awareness, firmly-fixed cultural beliefs, male-dominated society, more concern for the well-being of the male child (as the future torch bearer of the family), and the final word of the head of the family, compounded with the lack of accountability of the healthcare workers, were a few factors for their not seeking curative healthcare services. Increasing maternal education, the generation of intensified awareness through the mass media, implementing gender-sensitive interventions, and counseling may have positive implications for the future, leading to better health outcomes and favorable health indicators.

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Conflict of Interest:

There is no conflict of interest to be declared.

Authors' contributions:

Both authors contributed to this project and article equally. Both authors read and approved the final manuscript.

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