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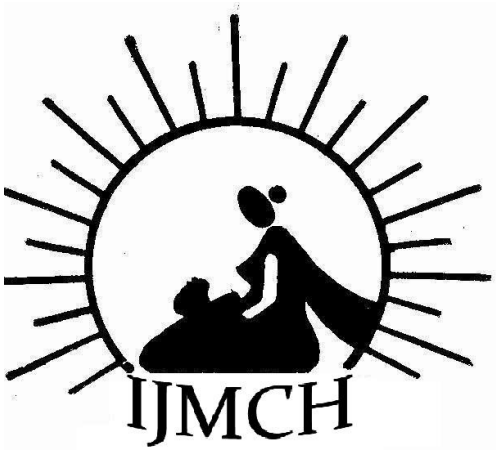

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The infant and maternal mortality rates in India are amongst the highest in the world. The main goals of this study were to investigate healthcare practices of mothers in authorised versus unauthorised sections of one north-eastern Mumbai slum.

Factors Associated with Maternal Healthcare Practices in Slum Dwellers in North-East Mumbai

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ABSTRACT

Background: The infant and maternal mortality rates in India are amongst the highest in the world. The main goals of this study were to investigate healthcare practices of mothers in authorised versus unauthorised sections of one north-eastern Mumbai slum.

Methods: This was a cross sectional study. Quantitative data were collected from an 11-item maternal health care survey administered to mothers in authorised areas (n=40) and unauthorised areas (n=60) with questions regarding demographics and maternal healthcare practices. Results: Significantly more mothers in authorised areas registered for maternal health services than those who lived in unauthorised areas (authorised areas 100%; unauthorised areas 87%, *P* = 0.016). A high percentage of mothers delivered outside of the slum, even though a hospital was located in their slum (authorised areas 37%; unauthorised areas 38%). Conclusion: Improvement in community engagement strategies and an increase in medical staff may facilitate better maternal health practices in this population.

Key words: ***Child Health, Maternal Health, Poverty, Slum dwellers, Women's health***

INTRODUCTION

The highest number of maternal death occurs in India.[1] Despite the availability of maternal health services in Mumbai, there is a low utilisation of municipal services with a preference for home births and deliveries at private clinics.[2] Common barriers to health care access in these populations are proximity and cost. [2-3] If women had greater access to quality health care providers, maternal and infant mortality rates could decrease.

Socioeconomic and cultural factors can impact the utilisation of maternal health care services in India. Factors include education of the mother, perceptions of health care quality and care, cost, and accessibility.[4-5] There is evidence that women living in the slums do not seek antenatal care (ANC) until the later stages of their pregnancy.[6]

Few researchers have investigated the attitudes and health care seeking practices of Indian slum dwelling mothers. More importantly, there is no current literature on the disparities in health care access between those who reside in unauthorised and authorised slum areas. The present study was conducted to assess factors associated with maternal health care practices of mothers residing in authorised and unauthorised areas of a north-eastern slum in Mumbai.

MATERIALS AND METHODS

Ethics

This study was conducted according to the guidelines laid down in the Declaration of Helsinki and under the supervision of the public health school at (TISS). Ethical approval was provided by the Office of Research Compliance and Biosafety from Texas A&M University on existing data.

Study population and design

This cross sectional study was conducted in the M Ward slum district of Mumbai, India. Residents are primarily slum dwellers living below the poverty line. Participants were recruited by going door to door in authorised and unauthorised areas of the slum. Sixty women from unauthorised slums and forty from authorised slums had given consent to participate in the study.

Eligibility

Participants were eligible for the study if they were a mother with at least one child who was below the age of 3 years, and resided in the slum area for the duration of their pregnancy.

Questionnaire

A survey was used to assess factors associated with the maternal healthcare practices of the study participants. The questionnaire had demographic questions pertaining to: age, religion, and literacy of the mother; the number of children in the household; and whether the family had a ration card. Questions about choices for ANC care and delivery locations were also asked. Additionally, the questionnaire was evaluated by the researchers for reliability and validity. In relation to questionnaire data collection, observations on housing structure were recorded to further identify authorised and unauthorised houses.

Definitions

A slum area is defined by the UN as “a heavily populated urban area characterised by substandard housing and squalor”. [7] Slum areas in this study were further described as unauthorised and authorised based on housing structure and location. Unauthorised areas comprise housing that is built on land that is not owned by residents, whereas in authorised areas, inhabitants pay rent and have proper documentation. [8] We also considered slum areas to be authorised if dwellings had four concrete walls, and were positioned closer to the central business district of the slum. Conversely, unauthorised areas were considered as those in which dwellings had corrugated iron walls and whether they were in isolation from the main slum district. The ownership of a ration card was recorded. Income level was assessed based on what colour the card was. A yellow ration card represented low socio-economic status (SES), orange represented middle class, and white was reflective of higher SES.

Data Analysis

Researchers conducted the data analysis by using STATA (Version 11.2). As data were normally distributed, data were reported as means (M) and standard deviations (SDs). χ^2 tests were used to measure the differences between unauthorised and authorised slum dwellers in North-East Mumbai. The p-value had a two-sided distribution and a value below 0.05 (p value ≤ 0.05) was considered statistically significant for this study.

OBSERVATIONS

In unauthorised slums, mothers were older and had more children than mothers who live in authorised mothers (Table 1). Approximately 97.5% of mothers in authorised slum areas held a ration card compared to 39% of those in unauthorised areas. All forty of the mothers interviewed in authorised slums had registered for maternal health services compared to 87% of mothers from unauthorised slums (P=0.016).

Table 1: Demographic characteristics of the study population(n=100)

	Mothers from unauthorised section of slum N = 60 Mean (SD)	N (%)	Mothers from authorised section of slum N = 40 Mean (SD)	N (%)
Mothers Age	27 (6)		25 (4)	
Number of Children	3 (1)		2 (1)	
Religion				
Muslim		60 (100)		36 (90)
Hindu		0		3 (7.5)
Christian		0		1 (2.5)
Card				
Yellow card (Low SES)		21 (35.6)		39 (97.5)
Orange card (Middle SES)		2 (3.4)		0
White card (High SES)		0		0
No card		36 (61)		1 (2.5)

Almost 40% of mothers in general were delivering at a maternity hospital outside of the local area, despite 69% of mothers receiving ANC at the local clinic (Table 2). The most common reasons for registering for maternal health care services were common knowledge for mothers in authorized areas, and being informed by a relative for mothers in unauthorized areas.

Proximity and cost appeared to be the major reasons all mothers chose the location for their ANC care (authorized area= 55.3%, unauthorized area= 42.1%; (Table 2).

Table 2: Maternal healthcare practices and associated factors between mothers residing in unauthorized (n=60)and authorized (n=40) slum areas

	Unauthorized section of slumN (%)	Authorized section of slum N (%)
Practices		
Registered for Maternal Health Services		
Yes	52 (87)	40 (100)*
No	8 (13)	0
ANC location		
MCGM (North eastern slum)	38 (64)	29 (74)
MCGM (Other)	12 (20)	6 (15)
Private	6 (10)	4 (10)
Other	1 (2.0)	0
Urban Health Centre	2 (3)	0
Pregnancy stage at which ANC care was sought		
0-3 months	21 (37)	13(33)
4-6 months	29 (51)	20 (51)
7-9 months	7 (12)	6 (15)
Delivery location		
MCGM (North eastern slum)	20 (33)	16 (40)
MCGM (Other)	23 (38)	15 (37)
Private	5 (8)	9 (22)
Home	9 (15)	0
Other	3 (5)	0
Reasons for registering for maternal health services		
Relative told me	14 (36)	6 (27)
C.H.W	1 (3)	(0)
Neighbour	8 (21)	(0)
Doctor	4 (10)	1 (5)
C.K	9 (23)	14 (64)
Other	3 (8)	1 (5)
Reasons for ANC location choice		
Proximity	24 (42)	21 (55)
Cost	12 (21)	7 (18)
Referral	5 (9)	0
Good care	8 (14)	4 (11)
Other	8 (14)	6 (16)

*ANC, Antenatal care; MCGM, Municipal Corporation of Greater Mumbai; C.H.W, Community health worker; C.K, Common knowledge.*P < 0.05*

DISCUSSION

Our findings demonstrate that there is a discrepancy in knowledge of the benefits one is entitled to and of the services available, between the two sub populations. It is imperative to acknowledge this divide, in order to establish equality amongst slum dwellers. This could be achieved by the facilitation of communication between community workers and NGO's with mothers from unauthorized slum areas.

Even though maternal health services were available to mothers in the slums, barriers such as cost and proximity prevented them from accessing these services. These findings are consistent with those found in cross sectional studies conducted in similar populations of Mumbai. [6] If a considerable amount of money is spent on healthcare in a household, this can affect spending on education and food, and thus leading to an increase in poverty in the household. [9]

Approximately 10% of ANC and 15% of deliveries were in private hospitals. Since 12% of women reported that good care was a reason behind their choice of ANC, our findings support the trend of mothers choosing to receive care from private institutions based on reputation than going to their local maternity hospital. [6,10] The reason is because private health care facilities are generally closer, have shorter queues, and have a reputation for quality care.[10]

A noteworthy observation from our results is that even though 69% of mothers received ANC in the local maternity hospital, 64% of mothers delivered outside of this hospital. This is interesting considering the local maternal hospital has the facilities required to conduct normal deliveries. This leads one to speculate that the expectation that first time mothers will have complications prevents them from the opportunity to deliver at the most proximal and affordable maternal hospital.

A larger sample size would have provided more power to the statistical significance of these results. Additional limitations include bias in both the respondents recalling events from the past (e.g., such as delivery and ANC experience), and interviewers communicating questionnaire items through the use of translators.

CONCLUSION

There are major discrepancies between the maternal health care seeking behaviour of mothers depending on whether they reside in an unauthorized or authorized section of a slum. Cost and proximity appear to be the greatest barriers to maternal health care access in this area.

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