

Maternal Health and Access to Healthcare among Migrant Workers Engaged in Informal Construction Work, Ahmedabad, India

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Abstract

Background:

A large proportion of migrant women in India are employed in the urban informal economy, which is often characterized by low wages, precarious work conditions, poor living conditions and lack of social security. Circumstances such as these have deep implications for the health and overall wellbeing of workers. Our paper focuses on the intersection of migration, informal work and maternal health among female workers in the construction sector. We specifically seek to understand women's perception and experience of morbidity and examine their ability to seek and access maternal healthcare during pregnancy, childbirth and during the postpartum period.

Methods:

The field work for this study was undertaken in Ahmedabad, India. We recorded anthropometric measurements and conducted in depth interviews with our primary sample of female migrant workers. We also conducted two focus group discussions (FGDs) with male workers and reached out to other stakeholders.

Results:

Anthropometric measurements (N=55) suggested that a significant proportion of women (47%) suffered from low BMI (M= 18.36, SD= 1.7). Participants reported that physical ailments, diseases and illnesses were a constant feature of their lives. Women associated morbidity with poor work and living conditions, exposure to pollution and lack of safety measures during work. Women reported working until the last month of pregnancy and returned to work within few weeks of childbirth. Only 32% of the women (N=50) in our study sample had received two or more antenatal care check-ups, 64% had had an institutional delivery and 62% had received postpartum care within two days of childbirth. Women suggested that their access to seek healthcare services in the city was limited due to time constraints, inability to take break from work, irregular wage patterns and lack of familiarity with urban health systems. Pregnant women expressed desire to go to the village for childbirth and postpartum care as there was likely to be familial support for care.

Conclusion:

Our study finds that informal work conditions and migration have diverse and complex implications for women in need of maternal health care. Future policy needs to take into account particular and peculiar needs of migrant women to address their health needs.

Background

Each year, tens of thousands of households in India undertake short term migration from rural to urban areas in search of work. This pattern of migration is particularly common among marginalized Scheduled

Tribe (ST) and Scheduled Caste (SC) groups in the country, which experience chronic poverty or hail from regions where work is scant or seasonal in nature (1). A large proportion of seasonal migrant households engage in informal work at construction sites, brick kilns, factories, hotels and other industries. Though this form of migration has been viewed as being necessary and inevitable (2), several researchers have also pointed out the high human costs of precarious work conditions at these informal work sites (3–5). This latter view stems from the fact that informal work environments often lead to high levels of exploitation as migrant workers mostly engage in ‘unskilled’ ‘low-skilled’ or ‘semi-skilled’ work, facing several physical, biological and mental risks and hazards. Workers vulnerabilities are further compounded by the lack basic social, legal and health protection (4,6). Studies have also found that migrants are rarely able to access urban health services despite increased proximity to these services in the city (7,8). They are also excluded from government health programs in the destination region merely on account of being migrants (9). Circumstances such as these have deep implications for the overall health and well-being of migrant workers. It is more for female migrants, who experience gendered health inequalities, particularly in relation to their sexual and reproductive health, and need to access maternal healthcare services (10). Against this backdrop, our paper focuses on the intersection of migration, informal work and health among female workers. In this paper, we specifically focus on maternal health among female migrants in the construction sector. The aim of this paper is two-fold: a) to categorize women’s current health status and document their perceptions and experiences of morbidities and maternal health b) and to examine how migration and informal work shape women’s ability to access maternal healthcare—during pregnancy, childbirth and the period thereafter.

1.2 Migration and health

Increasingly, migration and health are being deemed as a global health priority (11). The recent UCL-Lancet commission report acknowledges that poor migrants face inequalities in their health status and inequities in access to health care and other essential services. It underscores the importance of creating health systems that integrate migrants and cater to their health needs (12). However, despite their economic contributions to both the destination and source regions, migrant workers encounter social stigma, cultural and economic, political, institutional and structural barriers which delay or prevent the use of healthcare services (13). It has been found that even with better work opportunities, migration does not necessarily translate into improved use of healthcare services among migrant workers. A study in Indonesia showed that improved income did not reflect actual financial resources available for health expenditure as migrants preferred to remit a large fraction of their earnings instead of investing it on health (14).

With respect to female migrants’ access to healthcare, it has been noted that migrant women’s health problems are “exacerbated by their inferior social status as well as by their unique biological characteristics” (15). While it is widely acknowledged that timely use of maternal health services is critical to reduce maternal and child morbidity, migrant women face increased vulnerabilities—during pregnancy, childbirth and the postpartum period, due to inadequate access to healthcare provisions (16).

A study in Shanghai, China found that there were marked inequities in terms of access because migrant women encountered a “package of obstacles, ranging from lack of legal status, low social status, lower income and education and lack of insurance”, which prevented them from using maternal healthcare services (17). In Bangladesh, migrants were less likely to have antenatal care check-ups and more likely to have home births, though this improved with every additional year in the city (18).

A few studies have looked at maternal health among migrant women in India. Based on National Family Health Survey (NFHS 1992–93 and 200–06) data, a study on the effect of household wealth and migration status suggests that poor-migrant women were greatly disadvantaged in utilizing safe delivery with no significant improvements over two time periods (19). This study also found variation in utilization of delivery care by social groups, with it being least among those belonging to Muslim and Scheduled Caste groups. In Hyderabad, utilization of four antenatal care services by poor migrants (69.6%) was found to be lower than the general population (85.8%); migrant women also had lower rates of maternal tetanus toxoid vaccination and institutional delivery (20). Similarly, in Delhi, poor migrants, particularly more recent migrants, did not access all maternal healthcare services (7). While the evidence from each of these studies shape our understanding of migrant women’s health issues, a critical missing component is women’s work status. In this study, we also draw attention to women’s informal work environment alongside migration to understand how these cumulatively shape health experience and access to maternal health care.

1.3 Female migrants in construction work

With rapid urban growth, in the past two decades, the construction sector has emerged as one of the largest employers of labour in the country, employing close to 50 million people. Approximately 30 percent of this labour force consists of female workers, most of whom engage in informal work. The construction sector relies heavily on short term migrant workers, offering dual work opportunities - to both female and male workers. Female workers are often considered to be ‘helpers’ or ‘less skilled’ due to which they receive less than minimum wages, despite undertaking long hours of laborious and hazardous tasks. Women also experience occupational risks in the absence of adequate safety gear, and are exposed to poor work and living conditions (21,22). In this study, we take into account women’s migration status as well as their work environment to examine their health experiences and ability to access health.

Methods

2.1 Study Location

The field work for this study was undertaken over eight months at five construction sites in Ahmedabad city, located in the state of Gujarat in western India. Ahmedabad, which is experiencing tremendous urban growth, is an ideal location for studying migrant workers, as the construction sector in the city attracts

migrant workers from various districts in Gujarat as well as other states (23). Access to the construction sites for this study was provided by two partner organizations that run day-care facilities for workers' children.

2.2 Sampling criterion and procedure for data collection

In order to address the objectives of the study, we used a qualitative research framework as it facilitates deep inquiry of a problem within the natural setting of the subject under study (24).

As shown in table 1, our primary sample of female construction workers consisted of fifty-five women. Criteria for inclusion were the following: we included pregnant women ($n = 11$); breastfeeding women who had given birth in last 5 years ($n = 29$); and non-breastfeeding women who had given birth in the last 5 years ($n = 15$). The latter category helped us to interact with women who had experienced the entire spectrum of maternal health from pregnancy to the period after child birth in recent years. All women who agreed to participate were included in the study as long as they fit at least one of the three above listed criteria. Each mother's height and weight were measured using internationally standardized equipment Seca 417 and Seca 876 (Seca, Hamburg, Germany) respectively. The study team (principal investigator and a research assistant) followed globally standardized protocol used for measuring anthropometry (25). The anthropometric data was used to calculate Body Mass Index (BMI) scores, which have been categorized using WHO standards.

In-depth interviews were conducted with all fifty-five women. We determined several major themes for discussion, which included migration, informal work conditions, food consumption, health perceptions and experiences, and access to maternal health. Within each theme we prepared prompts or open-ended questions, which were based on the literature as well as our discussions with staff members of one of the partner organizations that has been working with migrant workers for about a decade. We also spent several months at construction sites engaging in direct observation (26) to observe women's work setting and patterns of work, as well as interactions with contractors among other things. At the same time, we undertook structured observation to record women's food intake during our home visits. These observations provided deeper insights and helped us frame more nuanced questions during our interviews.

Since men play a decisive role within their families, we conducted two focus group discussions (FGDs) with male workers. We approached several male workers at the labour colony and invited them to be a part of the study, eighteen agreed to participate. The only criterion for inclusion in this case was that the male participant had to have had at least one child below the age of five or had a partner who was expecting a child. The FGDs focused on migration and wage patterns, access to healthcare, perception of maternal health among several other related themes. We also reached out to other stakeholders ($N = 13$)- construction workers' union leaders, doctors, academic researchers working on health or migration, government employees, staff of not-for-profit-organizations, a maternal health activist among others.

Semi-structured interviews with these stakeholders focused on the larger context and were crucial to close data gaps.

Data collection and recruitment of participants were undertaken until we achieved data saturation, described as the point at which the collection of new data does not lead to any further information on the issue under investigation (27). By applying various methods of data collection (observation, interviews and focus group discussions) and by reaching out to various types of respondent groups (mothers, fathers and other stakeholders) we were able to triangulate our data, which helped us to achieve a more complete understanding of the issues under study (28). We also engaged in member checking—a technique that consists of continually testing with informants the researcher’s data and its interpretations (29) by periodically discussing our findings with staff members of partner organizations as well as with the members of the community in informal discussions to address misrepresentation of the data.

2.3 Data Analysis

The interview prompts were prepared in English and translated at the time of the discussion into Hindi and Gujarati, the local languages that are spoken by the workers. The interviews were then translated and transcribed back into English by the researcher and her research assistant, who are fluent in Hindi and Gujarati languages respectively. The researcher, who has working knowledge of Gujarati, reviewed half of the interviews that were translated and transcribed by the research assistant to check for consistency and errors. We employed a combination of a priori coding (codes created beforehand) and emergent coding (codes drawn from the text) (30). A priori codes were identified within each domain. For instance, within the domain “migration” we listed a priori codes such as: causes for migration, duration of migration, choice of destination and so on. Within each domain, emergent coding (also known as open coding) was undertaken, which was followed by axial coding for creation of concepts and selective coding for creation of categories (often the a priori code) (31). In this way, we regrouped a few a priori codes together, for example the sub-code “number of visits per year” was combined with “seasonal or semi-permanent” and found several new themes such as “migration during pregnancy”. This dual approach helped us to compare and contrast our data with the existing concepts and categories in literature and also simultaneously develop newer themes. Constant iterations were undertaken not just as mere repetitive tasks, but also to develop, refine and modify research questions for newer information (32)

2.4 Methodological challenges and limitations

At the field work stage, we made several attempts to gain entry into construction sites that did not have any form of interventions by not-for-profit organizations. However, the presence of two women (researcher and her research assistant) seeking to talk to other female workers was treated with suspicion and hostility by male security guards and contractors. For instance, at one construction site, the security guards thought we were government officials trying to enumerate the workers at the site, and at another we were seen as journalists wanting to create “trouble”. After due consultation with others who have

worked in this field, we decided to restrict our sample to those sites where not-for-profit organizations were able to provide us entry and access. Since construction sites that have interventions are likely to have more informed or sensitive employers, the problems articulated by our sample may be an underestimation of the daily trials that workers are likely to face at construction sites. We tried to overcome this limitation by asking women questions that spanned their experiences over multiple sites and migration trips.

Results

3.1 Demographic information

As seen in Table 2, a majority of the female participants in the study belonged to ST groups (76%), while the rest were from SC groups and Other Backward Classes (OBC). There was diversity in place of origin, with most coming from districts within Gujarat, Rajasthan and Madhya Pradesh that are close to the city of Ahmedabad, as well as from districts within states like Chhattisgarh, Bihar and West Bengal which are further away from Ahmedabad. The sample reflected very low levels of education among women, with 75% reporting that they had never been to school. Most women (69%) were unable to estimate their age bracket.

3.2 Labour characteristics and work conditions

3.2.1 Migration and mobility

We encountered two broad migration patterns among those living at construction sites. A majority of the women in the study sample (73%) were seasonal migrants (defined by NSS as households undertaking migration for one month or more up to a period of six months), from districts close to Ahmedabad. These households noted that they came to the city for shorter spells of time, returning to their villages periodically for agricultural work, weddings, festivals, and other cultural events. In this case, the migrants preferred to come to Ahmedabad, because of its proximity to their villages and also because their contractor had more established contacts in the city.

We come to the city whenever our thekedar (contractor) call us. He tells us and we go there (to the construction site) [...] We stay for a few months and then go back to the village. If he finds us more work, we come again (female participant)

The other women were semi-permanent migrants (defined as those who have been outside of their home for over six months) and had been living in the city for a longer duration - ranging from one year to five years. Several semi-permanent migrants reported that they had previously migrated to other cities as well.

I have been to many parts of the country. Delhi, Mumbai, Kerala. We will stay here as long as there is work and then move to another place (male participant)

Workers changed multiple locations within the city, as they moved from one construction site to another at the end of each project cycle, as their work at each site usually spanned between three months to over a year depending on the size of the project. We asked participants if this form of mobility affected their access to healthcare services.

I don't know where the hospital is here. But my husband knows and the contractor will tell us if we need to find a new one (female participant)

We asked women if they altered their migration pattern because of pregnancy and child birth, a few women said no, but the question did not elicit direct responses. Instead, during our focus group discussion, one man suggested that though his family had not necessarily changed their migration routine during his spouse's pregnancy, he took her back to the village in time for childbirth. Another male worker noted that their family's trip to the village was delayed because of monetary constraints, and in the meanwhile his wife delivered in the city:

We had taken a loan from the contractor and we were waiting to return that. We would be in the village, if we had the money. But she had to deliver here (male participant)

A similar situation was shared by another worker. However, in his case the family could not return to the village in time, because they had not realized the woman was close to delivering the child:

She (wife) delivered at the construction site when she gave birth to our son. We thought we still had time so we were here (male participant)

3.2.2 Wage patterns

Female workers reported being paid between Rs. 250–300 (minimum wage is Rs.306 per day). At most construction sites the wages were paid to the family as a unit and was generally collected by the male head of the family. Economic decisions such as amount to be used for daily expenses or remittances were generally taken by men as reported by several women.

I get paid the same as my husband I think [...] he decides what to buy and where to get it from. So, he goes. I don't go out of here (construction site) (female participant)

He keeps the money, but we also send it home. Our entire family (in-laws) is there. They need money for food and other things (female participant)

It was common practice for households to take *kharchi* - a form of cash advance, to meet weekly expense of food, medical care, remittances and debt repayments. The *kharchi* amount was settled against the wage entitlement of the workers, either at the end of the month or when the household chose to do so, like

in the case of a trip back home. A construction union leader told us that this system of *kharchi* also led to wage theft, wherein workers rarely received their due payment. He attributed it to the absence of labour regulation and unclear employer-employee relationship as workers were hired through a complex network of contractors and sub-contractors.

Workers don't keep a record of the money they have borrowed or the number of days they have worked. The contractor routinely pays them lesser but they are not able to challenge it. This affects all aspects of their lives, including health expenditure.

While the system of *kharchi* provided workers liquid cash for regular expenses, it also increased workers' wage insecurity and dependence on the contractor for economic support. As reported by one of the male participants there was a constant worry about mounting debts.

Last year we took Rs. 50,000 from the contractor. We are not sure how we will do it (repay it). Sometimes we don't take money for the week [...] but we have to take more (for daily expenses) and he adds it to the account (male participant).

This form of wage insecurity had implications for the kind of economic choices the family made. Importantly, as we explain in the sections ahead, it affected their decision to access maternal health care.

3.2.3 Living conditions and work environment

At the construction site workers lived in labour colonies that had separate partitioned space for each family unit, or a couple of families put together. Shelter space was not standardized across the various construction sites we visited and varied from temporary arrangements made out of tarpaulin sheets to more systematically built spaces that had tin walls. In terms of access to sanitation facilities, all construction sites that were included in the study had temporary toilet blocks within the premises of the labour colonies. However, the ratio of number of workers to the number of toilet blocks was extremely low, which made usage difficult. At two sites, women also noted that there were no toilet blocks at the place of work, which was at a distance from the labour colony. As reported by one pregnant woman this made it difficult as she felt the need to urinate more frequently.

Sometimes my stomach hurts. But we can't go (to the toilet) very often. (pregnant woman).

Similarly, workers were concerned about the quality of water.

Last month I fell sick again. Vomiting and bad stomach pain. I couldn't go to work for many days. They said it may be the water, it was black. It had insects and we complained to the contractor but nothing was done. (female participant)

Women worked all days of the week. Most women reported beginning their day early in the morning, around 5.00 am and going to sleep between 9–10.00 pm. Women were responsible for all household

chores such as cooking, cleaning, washing as well as child care. At all construction sites we visited, the workers were allowed to take only one break, at lunch time. As we observed, women including those who were pregnant, undertook laborious tasks such as head-loading or lifting stones and bamboos, filling cement, cleaning etc. Most women reported working for 9–10 hours a day, sometimes extending up to 12 hours.

If I don't do it (laborious work) I won't get paid. (pregnant woman)

Sometimes if I can't do it my husband does my share of work too. But it slows his work. I try to do whatever I can. (pregnant woman)

Women worked in the midst of heavy equipment and other construction material without any safety gear, which made them susceptible to injuries. These circumstances posed a serious threat, especially to pregnant women.

Yes, sometimes I get scared. What if I fall? But I try to be careful. (pregnant woman)

Last year I had a deep cut on my leg. It took me three months to recover. [...] no, the contractor didn't pay any money even though it happened here, and I could not earn any money. (female participant)

3.3 Food intake

In general, women had two meals a day: lunch and dinner. Our structured observation carried out in their homes at lunch hour suggests that lunch primarily consisted of two small wheat or corn based *rotla/roti* (flat bread) or a cup of white rice with *dal* (lentils) or a curry made of vegetables such as onions, tomatoes, and eggplants that were "*inexpensive*", "*easy to clean and cook*". None of the participants had eaten green leafy vegetables, fruits, eggs and dairy products on the day of our observation. Only four women recalled cooking meat (chicken) in the past month.

We also observed that women constantly chewed a mixture of tobacco and areca nut. Several women told us they consumed 4–6 packets a day, because as suggested by a participant, it "*helped reduce hunger when at work*". During our field work in the months of October and November, we observed several women, including pregnant women doing a 'fast' for a religious festival. Their lunch consisted only of puffed rice and some other snacks. Several migrant households carried maize flour, wheat flour and a few other non-perishable items that were grown in their villages. These proved to be the dietary mainstay of the family, which had to be substituted by locally available products at the end of the stock. Households that did not have this option indicated that expenditure on food items was high especially because they were forced to buy in small quantities from the local vendor due to daily budgetary constraints. Though workers said they did not have any trouble accessing food markets, several female and male workers commented that cost of food was much higher in the city.

None of the workers reported having access to the public distribution system (PDS)—a subsidized government program that provides food (rice, wheat and sugar) and non-food items (kerosene) through fair price ration shops to poor families, while in the city. This was because the PDS is tied to domicile status, and the workers did not qualify for it in their current location.

When we are in the village, we get everything. But here, we don't get anything (female participant)

3.4 Health status and experiences

3.4.1 BMI Scores

A significant proportion of women in our study sample (47%) were underweight or suffered from low BMI ($M = 18.36$, $SD = 1.7$) (Table 3). Among the women who were underweight, 19% were severely thin, 30% moderately thin and 50% were mildly thin. Of the 11 pregnant women in the sample, four were underweight.

3.4.2 Perception and experience of morbidity

The WHO defines maternal morbidity as a “condition attributed to and/or aggravated by pregnancy and childbirth that has a negative impact on the woman’s wellbeing.” To record the incidence of maternal morbidity, we asked pregnant women, a sub-set of our sample ($N = 11$) to self-report all diseases, ailments, illnesses and infections they had experienced in the past two weeks. The two most commonly reported health problems that this sub sample of women associated with pregnancy were *ulti* (nausea) and *dard/ sarirma dukhav* (body pains). The other common ailments that were reported by all women, including pregnant women were *sardi/zhukhaam* (cold), *khansi* (cough), *sar dard* (head ache), *dast* (diarrhoea), *thakav* (tiredness), *pet dard* (abdominal pain), *peetma dukhav* (back pain).

Few days ago, I fell very sick. It happens often. The doctor gave me two injections. [...] not sure what was wrong. But I couldn't even stand. (pregnant woman)

My back always pains at night. But when I wake up in the morning it's better. (pregnant woman)

A doctor, who conducts regular health check-up camps with construction workers considered these health ailments to be a reflection of an overall poor health status:

Many of these women are already weak when they come to the city. Here, they do hard labour work [...] are exposed to dust and cement all day and that usually leads to respiratory issues. And then there is noise and vibration from the equipment. Imagine what these things can do to a pregnant woman.

In terms of long-term ailments, five women had been diagnosed with Tuberculosis and were receiving medical treatment in a nearby hospital for the same. Two women had been admitted in the hospital for

the treatment of malaria in the past year. In the absence of medical records or diagnosis, we were unable to verify morbidity and had to rely on self-reporting of the participants.

3.5 Access to maternal health care services

3.5.1 Constraints caused by money, location and time

Severe time constraints restricted utilization of healthcare services in general. Several women noted that they couldn't travel alone within the city and had to be accompanied by their spouse. This usually meant a loss of daily wages for two people, which the family could not afford.

The hospital is far. I don't know how to go there alone. My husband has to come. Then our contractor will cut full day's money. (pregnant woman)

Furthermore, as discussed in the previous section, irregular wage patterns created economic constraints because of which maternal health, which was not considered to be a serious "illness" did not take precedence in the family.

She is fine. We will go if needed (male participant)

I went to the doctor once. I don't think (need to go again), it takes a lot of money. (female participant)

Many households found it difficult to access government run hospitals because of the distance or because they were very crowded. In one construction site that was located on the periphery of the city, people complained that they had to walk at least two kilometres to get to the main road to find transportation to reach the closest hospital. A large number of women said it was especially difficult to make this journey during pregnancy or with young children.

I can't go alone, its far. If he (husband) comes, then there is no one to look after the children at home (female participant)

They said the hospital (government run) is very far. We will find out if we need to go. Right now, we are all okay. (female participant).

In turn, private healthcare facilities in the vicinity, which were available at a time convenient to them (post work hours in the evening) were preferred by workers. However, private healthcare services cost exponentially more, which limited their visits.

Each trip to the hospital costs Rs.250–1000. That is more than what we make as a family in a single day. We go if someone has fever, otherwise we don't. (male participant)

We also heard from a few women that they preferred private hospitals for treatment of illnesses but for maternal health services they generally went to government hospitals. This was because maternal health costs were much higher in private set ups, which the family could not afford.

When my child had malaria, we went to private hospital but it cost us Rs. 1800 for two days [...] I delivered my last child in civil (government hospital) [...] private is better but someone told us that it can cost Rs. 20,000 to have a child there. (female participant)

3.5.2 Lack of follow up during antenatal care

A few women noted that they did not know about their pregnancy until the second trimester. In general, most women in the study sample (Table 4) did not receive an adequate number of antenatal care check-ups. Some did not know that more than one checkup was required, while others didn't find it necessary to seek medical care. One woman noted that she lagged behind in seeking antenatal care because of migration.

Last time I was pregnant, I went to the doctor more often because I stayed at home. This time I had one check-up. I don't know where the hospital is here. So, I have not gone to the doctor yet. I will go later, if I need to (pregnant woman).

When we asked women if they had received iron and folic acid (IFA) tablets and tetanus toxoid injections that are recommended by the government as part of antenatal care, numerous women replied in the affirmative. However not everyone among them could ascertain if they had completed the entire course of the medicine or had received the injection. One woman exclaimed that she had "*forgotten to carry it with her*", another remarked that the *goli/davai* (medicine or tablet) did not make her feel better, so she threw them away. Only a few noted that they had them every day as the doctor had emphasized its importance.

3.5.3 Challenges in institutional delivery and postpartum care

In our study sample, 58% of the women (Table 5) had institutional births. Sixteen women delivered at home (6 in the city, and 10 in the village). While two women said they had done so under the supervision of their family members in the village, three women reported doing it with the help of a local '*dai*' (midwife), though they were unable to tell if this was a trained government employee.

Of the 11 pregnant women in the study sample, nine told us that they wanted to return to their village for child birth as they would receive support from the family. Three also noted that they were more familiar with the hospital set up back home.

I know where it (hospital) is in the village. I can always find someone to take me there. Here I don't know. (female participant)

Though, male workers did not find the quality of care very good in the village, they felt that healthcare was more affordable in the village than in the city.

There (in the village) you take a bus or find other transport to the hospital but it is still cheaper than the doctor here (private practitioner). [...] the government hospital (in the city) is a waste. (male participant)

This viewpoint was contradicted by a pregnant woman, who said she was keener on delivering in the city as the hospital in her village was far from home and inaccessible:

When I delivered my last child, we spent Rs. 10,000 to reach the town hospital. In our village the doctor said he couldn't admit me because there was something (health complication). We had to get a private vehicle. In the city it's much easier. You sit in the auto (autorickshaw) and you reach the government hospital

One woman reported that there was greater pressure to deliver at home when in the village:

I wanted to go to the hospital. But my husband and in-laws said when it can be done at home why go so far to the hospital.

In terms of postpartum care, among those who had delivered at home, three women reported that they had not received any postnatal care from a hospital/nurse or doctor as their family members did not find it necessary to seek care. Others mentioned that they went to the hospital much later because they had to get their child vaccinated or because they experienced a complication.

I didn't go to the hospital at all. All my children (3) were born at home. (female participant)

I had lost a lot of blood at home. So, they called the doctor. He came after four or five days (female participant)

Two women also told us about their still born children - one woman was not sure what had caused the loss and the other noted that it may have been caused by her prolonged illness. The family back home played a greater role in helping the women recover from childbirth as articulated by one female worker:

I stayed at home. Everyone was there to look after the baby and me. (female participant)

Over half of the women in the sample claimed to have returned to work within two to three weeks of delivering a baby. One of the reasons for this was that women thought it was okay because they had seen others do so. But on prodding further, several women also acknowledged that they were compelled by monetary obligations to return to work.

Everyone works after a baby. It's been two weeks already (since child birth) so I returned to work. (female participant)

A woman who had recently delivered a baby in the city complained that the lack of additional support made it more difficult for her as she wanted to return to work.

There is nobody to help. I have to look after the baby and go to work. It's very difficult. But I have to earn money. (female participant)

Discussion

It is known that a disproportionately large number of migrants undertaking informal work belong to marginalized social groups such as ST and SC communities (33). The NFHS data shows that these social groups continue to experience poor maternal health related outcomes (34). For instance, ST and SC groups are less likely to receive four antenatal care check-ups from a skilled provider such as a doctor, auxiliary nurse midwife, nurse, midwife, or lady health visitor, in comparison to other groups [SC–49%, ST–46% and other groups–61%] and are also less likely to deliver in a health care facility [SC–78.3%, ST 68.0%, others - 82.9%] (34). Similar trends have been captured in various field studies that have shown that in terms of maternal mortality and morbidity, prevalence of anaemia and BMI scores, ST and SC women continue to experience far worse outcomes than those belonging to other social groups (35–39), and are least likely to have an institutional birth (40) or receive postnatal care (41–43). While studies have attributed poor maternal health outcomes to a wide range of factors including socio-economic conditions, low literacy levels, poor access to family planning methods and healthcare services, (44–46), the role of migration and informal work in shaping these maternal health experiences is rarely explored. In this paper, we acknowledged this intersection and examined it cumulatively to address a critical gap in the literature.

The BMI scores based on anthropometric measurements in our study sample revealed that a large number of women (47%) suffered from poor health status and experienced several forms of morbidities. However, we found that to some extent women's own understanding of their health status and perceptions of maternal morbidity, and thereby the need for healthcare, were reflective of their social references and economic constraints (47). For example, even while women mentioned instances of ill-health, they simply considered them to be a common aspect of their lives. In most cases, compelled by economic constraints, women continued to undertake laborious work even during pregnancy and in the postpartum period, because this was also consistent with what other women did in their communities. This finding complements similar experiences elsewhere which suggest that in socio-economically marginalized households that have historically encountered poverty and deprivation, poor health experiences are often normalized because they are a constant feature of women's lives (48).

While we did not measure women's nutritional intake, as we have reported here and elsewhere, inadequate food intake is common among these groups (49). There is evidence to suggest that poor maternal nutrition during pregnancy can affect pregnancy weight gain as well as risk of low-birth weight among newborn (50). Women also had other additional stresses during pregnancy. For instance, at the work site women worked long hours, were constantly exposed to high physical stress even during pregnancy and in

the postpartum period. Poor living conditions further exacerbated their susceptibility to health ailments. While these experiences have been shared by women at other construction sites in the country (51), we looked at it with reference to maternal health. Importantly, while our study shows the centrality of informal work conditions in influencing health experiences, it also brings out how access to care is affected by persistent economic insecurity which is an additional and dominant aspect of informality. While the contractor provided workers access to cash (albeit workers' own money) for daily expenses and medical emergencies, this practice increased households' dependence on the contractor for cash. Consequently, households often avoided or delayed hospital visits because of such financial constraints. Antenatal care was deprioritized because it is not an "*illness*" as suggested by a male participant nor an "*emergency*" as noted by a female participant. Pattenden (2012) has noted informal work practices lead to wage insecurity in migrant households' even with an increase in income during migration, because earnings are often directed towards repayment of debts and cash advances. As a result, households rarely get the opportunity to spend on improving their lives, whether in the form of health or education expenditure. In our study, we found this amplified, wherein households were unable to spend on women's health due to economic constraints. Betancourt et al. (2013) have also found that high costs of health care can push migrants further into debt and force them to turn to their *jamadars or thekadars* (contractors) for loans for essential healthcare. Understanding this aspect of informal work is essential to decode poor uptake of healthcare services among migrant households. Studies from other parts of the world also report that financial constraints and the unpredictable nature of out of pocket expenses contributed to lower utilization of health care services among migrants (53–55). This appeared repeatedly in our data as well.

Our findings also demonstrate that outside of the economic dimension, availability of social support plays a deciding role in determining the location of childbirth and postpartum care. Most women wanted to return to the village for childbirth and the postpartum period, even though they conceded that maternal healthcare services were better, more efficient and cleaner in the city. This was primarily because they had greater familial support for care in the village, which women found crucial during childbirth and in the postpartum period. Women also noted that they could find help more easily in the village for accessing health-care infrastructure. This finding is a departure from the widely held assumption in migration studies that proximity to healthcare infrastructure in urban areas is sufficient to increase uptake of healthcare services (56,57). The role of social support for maternal health care is probably more vital than acknowledged, as articulated even by those women who showed preference staying the city for childbirth.

Conclusion

We describe and document the micro context of migrant women's work environment, which is key to imagining policy interventions that can address the specific and peculiar needs of migrant workers. While the findings of our study that are specific to the construction sector may not be generalizable, they may be transferable to other field sites which see the presence female migrant workers from disadvantaged groups that are engaged in informal work such as the garment industry, brick kilns, quarries and domestic work.

List Of Abbreviations

ST: Scheduled Tribe

SC: Scheduled Caste

OBC: Other Backward Class

FGD: Focus Group Discussion

NFHS: National Family Health Survey

IFA: Iron and Folic Acid

BMI: Body Mass Index

Declarations

Ethics approval and consent to participate

Ethical clearance for this study was obtained from the Internal Review Board (IRB) at the Washington University in St Louis, where the first author was a doctoral student. The IRB ethics committee did not require approval from an Indian institution. Since this was a low-literacy setting, we sought verbal informed consent from the participants, a common practice under such contexts as also approved by the IRB. The privacy and confidentiality of the participants were maintained throughout the study.

Consent for publication

Not applicable

Availability of data and material

The data set supporting this article is available with the corresponding author and can be accessed upon reasonable request.

Competing interests

The authors declare that they have no competing interests.

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Authors' contributions

DR conducted the field work for this study and wrote the first draft of the manuscript. LI helped fine tune the research design and also provided extensive comments on the manuscript. The final version has been read and approved by all the authors.

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Tables

Table 1: Sample and methods

Sample	Sampling criteria	Methods
Mothers (<i>N=50</i>)	Criterion sampling	Indepth interviews Anthropometric measurements Observation
Fathers (<i>group 1: N=10; group 2: N=8</i>)	Criterion sampling	Focus group discussions
Other stakeholders (<i>N=13</i>)	Snowball sampling	Semi-structured interviews

Table 2: Demographic profile of female workers in the study sample (N=55)

		N	%
Place of origin	Gujarat	14	26
	Rajasthan	13	24
	Madhya Pradesh	11	20
	Chattisgarh	8	14
	Bihar	4	7
	West Bengal	5	9
Caste	Scheduled Tribes	42	76
	Scheduled Caste	7	13
	Other Backward Classes	6	11
Age (rough estimates)	Between 15-20	9	16
	Between 20-25	8	15
	Don't know	38	69
Education level	No schooling	41	75
	Up to class 4	6	10
	Up to class 8	8	15

Table 3: BMI scores of women in the study sample (N=55)

Classification	BMI (kg/m ²)	N	%
Normal range	18.50-24.99	29	53
Underweight (<18.50)			
Mild thinness	17.00-18.49	13	24
Moderate thinness	16.00-16.99	8	14
Severe thinness	<16.00	5	9

Table 4: Record of antenatal care (N=50, first time pregnant women were excluded from this sample)

How many times did you go to the doctor during your last pregnancy?	4 times	0
	3 times	6
	2 times	10
	1 times	18
	None	4
	Not sure	12
Did you receive and consume tetanus injections and IFA tablets?	Yes	19
	No	10
	Not sure	21

Table 5 Study sample's record of institutional birth and postnatal care (N=50, first time pregnant women were excluded from this sample)

Did you have an institutional birth?	Yes, rural facility	24
	Yes, urban facility	8
	No	16
	Not sure	2
Did you receive postpartum care within two days?	Yes	30
	No	12
	Not sure	8

Note: as per the NFHS data those women who delivered in institutions or who received care from a doctor/nurse/LHV or ANM within 2 days of delivering at home are considered to have received postnatal care