International Journal of Community Medicine and Public Health
Borah R et al. Int J Community Med Public Health. 2023 Jul;10(7):2479-2485
http://www.ijcmph.com
pISSN 2394-6032 | eISSN 2394-6040

DOI: https://dx.doi.org/10.18203/2394-6040.ijcmph20232040

Original Research Article

Risk perceptions among high-risk pregnant women in an aspirational district of India: a qualitative study

Rinku Borah*, Parimita Roychoudhury, Sabrina Yesmin

Department of Community Medicine, Dhubri Medical College, Assam, India

Received: 26 April 2023
Accepted: 09 June 2023

***Correspondence:**
Dr. Rinku Borah,
E-mail: drrinkuborahredhouse@gmail.com

ABSTRACT

Background: Attitude and behavior towards health seeking decisions are affected by one's risk perceptions. This formed a key component in many health behavior-change theories and is responsible for reduction of perinatal mortality. A woman's perception of risk affects her decisions about seeking obstetric care. This study explored the perceptions of high-risk pregnancy among women with high risk factors.
Methods: A qualitative study was conducted in an aspirational district of India. Participants included pregnant women in third trimester with high risk factors. In-depth interviews were conducted with 34 participants using semi-structured interview schedule.
Results: Three main themes emerged in this study: (i) knowledge of risk (ii) attitude towards risk (iii) adoption behavior. The study found out women's lack of understanding on high-risk conditions during pregnancy, especially among younger age group. Majority denied the risk factor and normalized delivery on one's faith.
Conclusions: The findings of this study provide a glimpse into how women perceived risk and the reasons that lead them to deny the risks. Women must understand their risk in the same way as their healthcare providers. If an event is not appraised as severe, there will be no change in behavioral intentions inspite of all the efforts put by the government for reducing perinatal mortality.

Keywords: High risk, Risk acceptance, Risk denial, Risk perception

INTRODUCTION

Pregnant women are one of the most vulnerable groups.[1] High risk during pregnancy occurs when the pregnant mother has underlying problems before or during pregnancy, due to which her physical, psychological, and social vulnerability increases.[2] The prevalence of high-risk pregnancies in India ranges from 20-30%, which is responsible for 75% of perinatal morbidity and mortality.[3]

Attitude and behavior towards health and health seeking decisions are affected by one's risk perceptions.[4,5] This formed a key component in many health behavior-change theories.[6,7] Reduction of maternal and perinatal mortality and morbidity largely depends on the risk approach.[6] Therefore the process of risk assessment is needed to be started early in pregnancy, based on which required examination and treatment can be identified at an early stage.[2] Mitigating high-risk conditions include adherence to early and frequent antenatal care, specific treatment, birth preparedness and early referral.

Risk understanding by an individual is dependent on previous experience, life philosophy and the sociocultural context in which they live.[8] Low-income countries shows a considerable difference between the proportion of pregnant women identified as high risk and those who attend referral level care.[9-13] Evidence also shows that high risk of pregnant women defined/identified by experts had little influence on a woman's decision to seek hospital care.[9] Researchers have indicated that risk

perception by pregnant women is not exclusively based on medical diagnoses and is highly individualized.[5,10]

Maternal mortality ratio of Assam is 195 which is highest in the country and Dhubri is one of the highest contributing districts in the state.[14] Dhubri is one of the Aspirational districts which shares national and international boundaries. The district caters to vulnerable population residing in both urban slums as well as riverine char areas. The geographical and sociocultural factors might contribute to the poor performance of the district in the area of maternal health. Though numerous studies have been conducted on the prevalence of maternal death and factors contributing to it, but very less focus has been given on the perception of risk among these vulnerable group. This study aimed to explore the risk perception of pregnant women with high-risk factors.

METHODS

A community-based study using qualitative research design was undertaken in the district. The study was conducted from November 2022 to January 2023. Individual in-depth interviews were conducted among pregnant women with high-risk factors.

Study setting

Dhubri district was selected because it falls amongst the districts reporting highest number of maternal and child deaths and having home delivery pockets. The district caters to vulnerable population residing in both urban slums as well as riverine char areas. The district contains around four hundred riverine char areas of which around two hundred are inhabitant char areas catering to 3,84,000 population of the districts. The district is bounded by both National and International boundaries like Bangladesh, West Bengal, Meghalaya, Bongaigaon and Kokrajhar. Health care is provided by a combination of government (1 medical college, 1 sub divisional civil hospital, SDCH, 9 CHC, 33 PHC), private hospitals and polyclinics. The district has 7 health blocks. Out of these blocks Dharamsala block contributed the highest number of maternal and child death. Study was therefore conducted in villages under this block to find the risk perception among the pregnant women.

Sample and recruitment

Purposive sampling was used to recruit participants from 10 villages under 2 sub centres. Pregnant women in their third trimester with high-risk criteria were taken as inclusion criteria, while rest pregnant women were excluded. Pregnant women without any risk factor, high risk pregnant women in labour or admitted for delivery or those who did not give consent were excluded.

The criteria for participants selection involve a list of high-risk criteria that have been constructed in collaboration with the district health society from sources like high-risk pregnancy, national health portal, NIHFW, MoHFW, Pradhan Mantri Surakshit Matritva Abhiyan (PMSMA). The front-line workers (FLW) (ASHA and ANM) were the first contact point to enquire about eligible participants. Although the state has been training the FLWs on identification of the high-risk pregnant women (HRPWs) and early referral, for the purpose of the study these FLWs were given an orientation listing all the high-risk criteria for identification of participants. The participants were identified in the village health nutrition days, ANC visits and routine home visits. A total of 34 high risk pregnant women (HRPW) were selected for the study. The women were located in their community/villages with the help of FLWs based on their records. They were explained about the study and was invited to participate. The informed consent was read to them and written consent was obtained for adult participants, whereas assent form was obtained for minor participants. The data generation process was performed following the Helsinki declarations guidelines and regulations. The principal investigator was involved in data generation to reduce the loss of information.

Data collection

The data was collected through semi-structured interview schedule. The interview was conducted at the home of the participant in presence of an ANM and ASHA so that she felt comfortable and no issue of language barrier occurs. In-depth interviews were taken in Assamese language or local dialect. FLW assisted in translating the local dialect in cases required. In-depth questions like “Can you describe more or elaborate?” and “Could you give an example?” were used during the interview to clarify the explanations and summarize the interview, and obtain feedback to ensure that the researcher understood correctly. In the end, the participant was asked: is there any topic you want to talk about? The interviews were audio recorded. To develop rapport the interview was started with sociodemographic information followed by specific questions, each interview lasted for 45-60 minutes. The participants were recruited till data saturation was achieved. All the recordings were transcribed and translated into the English language for ease of coding and analysis on the same day of data collection to avoid recall bias. The principal investigator transcribed the interviews to secure confidentiality, and participants were de-identified during the transcription phase.

Data analysis

Data collection and analysis was carried out concurrently using the Granheim and Landman (2004) method of qualitative content analysis. Each interview was considered as a unit of analysis. After each interview, the researcher would listen to the audio file several times to get an overview of the content. The text content was transcribed in the same words as used originally during the interview. Meaning units were assigned to those

sentences or paragraphs which was related to the main concept. The meaning units were reviewed several times before being assigned appropriate codes. Following the reduction and compression process, similar codes were merged, and subcategories appeared. The process of data reduction continued until the final category with a general and abstract meaning were extracted. Data analysis and management were carried out using the CAT (coding analysis toolkit) and Q-Notes.

The Lincoln and Guba (1985) method was used to maintain the accuracy and trustworthiness of the data. It included credibility, dependability, confirmability and transferability. To ensure credibility, the coded texts were shared with other members of the research team for discussion and validation of the extracted codes, subcategories, and categories (peer review). The codes extracted from the text were shared with five FLWs and 5 participants to confirm the correct understanding of their experiences (member check). To ensure data dependability, the transcripts of the audio files and interviews were analyzed separately by three of the researchers. All the stages of the study, audio files and interview transcripts, were documented to achieve confirmability. The study presented demographic information, age, education, number of pregnancies and type of pregnancy complication to maintain transferability.

RESULTS

The women's mean (standard deviation) age was 22.9 years (6.01) and age ranged from 14 to 36 years. All the participants belonged to Muslim religion and majority had extended family. Majority of them were uneducated and home maker. Majority of the participants were first or second birth order with anemia being the most common risk factor among them (Table 1).

Table 1: Participants characteristics (n=34).

		Number	Percentage
Age (in years)	<18	12	35.29
	18-35	19	55.88
	>35	3	8.82
Ethinicity	Muslim	34	100.00
Family	Extended	26	76.47
	Nuclear	8	23.53
Education	Uneducated	20	58.82
	Under matriculate	11	32.35
	Matric pass	3	8.82
Occupation	Home maker	31	91.18
	Daily wage earner	3	8.82
Husbands occupation	Daily wage earner	7	20.59
	Mansion/ Carpenter	3	8.82
	Farmer	18	52.94
	Rickshaw puller	4	11.76
	Business	2	5.88
Parity	First	15	44.12
	Second	11	32.35
	Third	6	17.65
	Fourth	1	2.94
	Fifth	0	0.00
	Sixth	1	2.94
Risk factor (multiple options)	Teenage	12	35.29
	Grand multipara	1	2.94
	Previous miscarriage/ abortions	5	14.71
	Previous cesarean section	5	14.71
	Multiple pregnancies	4	11.76
	Anemia	27	79.41
	Gestational hypertension	3	8.82
	Pre eclampsia	2	5.88
	Previous still birth	6	17.65

Table 2: Context, subthemes and themes for the meaning of risk.

Initial context	Subthemes	Themes
Heard about the risk	1.1 Knowledge and sources of risk	1. Knowledge of risk
Sources of knowledge about the risk		
Knowledge of "I am at-risk"		
Reason for not knowing about the risk	1.2 Reasons for inadequate knowledge about risk	
Emotional distress	2.1 Positive psychological response	2. Attitude towards the risk
Conflict and doubt		
Not relating the risk to oneself	2.2 Ignorance of risk	
Reasons for ignorance of risk		
Follow health protocols/ birth preparedness	3.1 Risk acceptance and coping strategies	3. Adoption behavior
Access to health services		
Childbirth involves risk, but it is normal	3.2 Risk acceptance and normalizing childbirth	
Experienced actual risk and feelings of being at-risk		
Everything is fine with me	3.3 Risk denial and willingness to take risk	
Taking risk		
Seeking normal pregnancy reassurance for homebirth		

Theme 1: knowledge of risk

Subtheme 1.1: knowledge and sources of risk

Majority (28 out of 34) of the participants have heard about their risk. High risks mentioned by them were too much bleeding, high blood pressure, swelling of limbs, low blood and death during child birth. Only few of the participants, were unaware of the risk present in them. They responded, "I don't know," and "I have not witnessed anything such, so I don't know anything." The teenage pregnant women were less aware that their age is also a high risk. Participants sources of knowledge were mainly the FLWs. Only 4 participants had been informed by their immediate family members (mother, mother-in-law, sister-in-law) and relatives. 2 participants experienced adverse health consequences during previous childbirth and was their sources of knowledge. Only two out of ten young participants mentioned that they were at risk because of their age.

Participant- "*ASHA and ANM visit our home at regular intervals. She informs us about our high-risk condition. They inform us to attend the VHND and also to attend regular checkups. Sometimes ASHA take us to the Medical College for checkup and test by informing us that we need checkup for my high-risk condition*".

Subtheme 1.2: reasons for inadequate knowledge about risk

Teenage marriage and teenage pregnancy are socioculturally accepted in the community where the participants resided. The elder residents of the family don't accept teenage pregnancy as a high-risk factor; hence, younger age childbirth was not considered a risk.

Participant- "*I know nothing about high risk. I have registered and also got the MCP card. ANM informed me my age is less. But I did not know about high risk".*

Mother-in-law- "*We were married at much lower age then these girls. Still, we have delivered safely in home. I have 3 boys and 3 girls. Our daughter has delivered normally. So, our daughter in law will do the same".*

Theme 2: attitude towards the risk

Subtheme 2.1: positive psychological response

10 out of the 34 participants had a positive attitude towards their risk factors. Out of them 3 had emotional distress regarding the outcome of delivery and only 2 doubted about her own health as well as the conditions during delivery.

Participant- "*I am informed about my risk factor. My husband is well aware of my condition. I will get admitted in hospital when pain starts or if I have any problem".*

Sister-in-law- "*Her high-risk condition has been explained by ASHA. She is short and weak. We have been looking after her. My husband takes care of her needs. We will admit her when time comes".*

Subtheme 2.2: ignorance of risk

24 participants did not relate the risk to oneself and accepted to be the wish of god (Allah). They have no views of themselves about their own health or outcome, decisions depended on their husband and elderlies. Even the elderly and relatives of the family didn't have concern

over the pregnant mother, and have accepted the risk as to be her faith as they have been living like this till date.

Participant- *Our faith is in the hands of Allah, whatever is destined to happen will happen. My decisions depend on my husband and my in laws*.

Sister-in-law- "*Whatever is destined to happen will happen in home only. We will not take our patient to hospital. Last delivery was conducted in home only. One relative of mine was admitted in hospital and died after seven days"* (Relative mentioned was not an obstetric case, patient died of other disease).

Theme 3: adoption behavior

Subtheme 3.1: risk acceptance and coping strategies

Very few of the participants accepted the risk and were willing to follow the health protocols. Only 5 participants had birth preparedness as well as good coordination with the treating doctor. Though few others said they will follow the health protocols, they did not have the knowledge of what to do and whom to contact in times of emergency. They only accepted the risks but were unaware of the preparedness needed.

Participant- "*I well understand my conditions. Last time I had complication during delivery. I developed confusion at home. I was taken to the hospital, I delivered a girl baby by normal vaginal delivery. I will conduct delivery this time in hospital only"*.

Subtheme 3.2: risk acceptance and normalizing childbirth

14 of the participants could relate the potential risks while giving birth but considered the events during pregnancy as normal event. While the faith laid in the hands of God. 2 participants experienced risk during her previous pregnancy. They accepted the risk but still considered her risk as a normal event of pregnancy. Birth preparedness was not their priority, instead other household activities like, going to field and daily activities gained priority. For these people earning money to feed the family is a priority keeping aside health as a secondary area.

Participant- *I understand the risk, ASHA and ANM have informed me about it. Everything depends on my husband and family. Whatever decision they make. I have nothing to say on it*.

Husband- *I understand the risk, we will see what happens. We have to go out for work also. The other female members are present to take care, we hope everything will be fine by the will of Allah*.

Subtheme 3.3: risk denial and willingness to take risk

The majority of participants did not relate the potential risks to themselves while giving birth. They considered pregnancy as a normal event and elements of threat during childbirth are unavoidable risk in every childbirth. The fate is in the hands of God. Furthermore, participants and their family members were mostly busy with household chores; discussion on pregnancy risks and planning for childbirth is not important.

Mother in law- "*We have delivered 5-6 children in homes during our times. Deliveries will be conducted safely at home rather than taking her to the hospital. We will not allow our daughter-in-laws to go to the hospital"*.

DISCUSSION

This study found out women's lack of understanding on high-risk conditions during pregnancy, especially among younger age group. These group of HRPW were less educated and falls in low socioeconomic class. The participants knew they were at high risk but couldn't express the understanding of high risk and therefore they lacked the coping strategies for a safe outcome of oneselves and the fetus. In spite of being aware denial among the participants was high.

Majority of the participants in our study knew that they were at high risk but knowledge among the teenage pregnant women was poor. Knowledge about their condition was imparted by the health care workers mainly the ASHAs and ANMs during their ANC in the sub centres, VHNDs and routine home visits. In other study similar findings about awareness of high-risk pregnancies was present.[8,15] But the source was not limited to health care workers as in this study. Multiple sources like their own experiences of risk, immediate family members and relatives' stories including health workers advice provided them the knowledge.[4,16-18] Studies also showed that these pregnant women put less weight on professionals' advice, instead, they trusted family members and friends' advice, especially from women who had similar experiences.[19] Besides healthcare providers, women with high-risk pregnancies turn to their close family members or friends who have children for advice.[4] Women valued advice given based on personal experiences from sources they trust.[20] Any discussion of risk is also influenced by the social context in which it occurs.[21] Poor obstetric history played an influencing role in perception of risk.[5]

Positive attitude towards the high risk was shown by very small number of the participants while majority did not relate the risk to oneself and accepted their faith. The participants attitude depended on the decisions of the elderly, who mostly ignored the risk. While other studies showed HRPWs developed coping strategies for themselves and the fetus irrespective of their employment status, culture, family history, or past personal experiences.[4] Contrary to the findings, our participants accepted the risk and sought assurance for normalization. Studies found increased contact with doctors and seeking antenatal care as sources of reassurance that everything is

well.[5,8,9] When women perceive the care received as reliable, it potentially reduces the risks.[22] A few studies found that women see themselves as facing less risk than average others.[1,10] This phenomenon is related to optimistic bias, where people who are susceptible to harm claim that they are less at-risk than their peers.[15] This bias could be because if precautions are available, it motivates optimistic thinking.[23] A review on women's motivations to give birth outside the biomedical system found that women from high income countries also place birth in God's hands while autonomously choosing and taking responsibility for homebirth.[19]

Very few of the participants accepted the risk and were willing to follow the health protocols. The majority of participants did not relate the potential risks to themselves and even denied the risk. Similar findings of high-risk denial among these pregnant women were found in other studies.[24-26] Women in our study viewed pregnancy as a normal event that can be managed at home. Similar findings were found.[17,23,26] Women weighed up the risk factors associated with high-risk pregnancy in the context of other essential elements of their lives primarily their husbands, other children, and careers.[10]

Women must understand their risk in the same way as their healthcare providers because evidence suggests that women may not follow recommended treatment if they do not assess the risk at the same level as healthcare providers.[21,22] If an event is not appraised as severe, as likely to occur, or nothing can be done about the event, no protection motivation would be aroused. Hence, there would be no change in behavioral intentions.[11]

CONCLUSION

Women must understand their risk in the same way as their healthcare providers otherwise they may not follow the recommended advice for birth preparedness. Women are willing to deliver at home in spite knowing they are at high risk. Sociocultural practice and belief that pregnancy/delivery is a normal event affects women's decisions for seeking care. Government have implemented various programmes and schemes to reduce maternal/perinatal mortality (like incentives, free diagnostics and medications for institutional deliveries), but to avail them pregnant women must understand their risk and change their behavior. If an event is not appraised as severe, nothing can be done about the event.

Adequate and proper explanation regarding the risks in pregnancy especially targeting the teenage pregnant women for adequate knowledge and risks involved would bring change in behavioral intentions.

Funding: No funding sources
Conflict of interest: None declared
Ethical approval: The study was approved by the Institutional Ethics Committee

REFERENCES

1. Fischhoff B, Bostrom A, Quadrel MJ. Risk perception and communication. Annu Rev Public Health. 1993;14(1):183-203.
2. Blackburn ST. Assessment of risk: perinatal, family and environmental perspectives. Phys Occupat Ther Pediatr. 1986;6(3-4):105-20.
3. High risk pregnancy. National Health Portal of India. Available from: https://www.nhm.gov.in/New_Update-2022-23/MH/GUIDELINES-%20MH/Guidance_Note-Extended_PMSMA_for_tracking_HRPs.pdf#:~:text=As%20per%20literature%2C%20about%2020-30%25pregnancies%20belong%20to%20high,PMSMA%20reporting%20platform%2C%20varying%20from%20State%20to%20State. Accessed on 1 February 2023.
4. Lee S. Risk perception in women with high-risk pregnancies. Br J Midwife. 2014;22(1):8-13.
5. Heaman M, Gupton A, Gregory D. Factors influencing pregnant women's perceptions of risk. Am J Matern Child Nurs. 2004;29(2):111-6.
6. World Health Organization. Risk approach for maternal and child health care: a managerial strategy to improve the coverage and quality of maternal and child health: World Health Organization; 1978.
7. Ferrer RA, Klein WM. Risk perceptions and health behavior. Curr Opin Psychol. 2015;5:85-9.
8. Carolan M. Towards understanding the concept of risk for pregnant women: some nursing and midwifery implications. J Clin Nurs. 2009;18(5):652-8.
9. Kowalewski M, Jahn A, Kimatta SS. Why do at-risk mothers fail to reach referral level? Barriers beyond distance and cost. Afr J Reprod Health. 2000;4(1):100-9.
10. Lee S, Ayers S, Holden D. A metasynthesis of risk perception in women with high-risk pregnancies. Midwifery. 2014;30(4):403-11.
11. Rogers RW. A protection motivation theory of fear appeals and attitude change. J Psychol. 1975;91(1):93-114.
12. Dujardin B, Clarysse G, Criel B, De Brouwere V, Wangata N. The strategy of risk approach in antenatal care: evaluation of the referral compliance. Soc Sci Med. 1995;40(4):529-35.
13. Gupta J, Gupta H. Perceptions of and constraints upon pregnancy-related referrals in rural Rajasthan, India. Health Serv Manage Res. 2000;13(1):6-15.
14. Sample registration system. Special bulletin on maternal mortality in India 2018-20. Government of India. Available from: https://censusindia.gov.in/census.website/data/SRSMMB. Accessed on 1 February 2023.
15. Weinstein ND. Unrealistic optimism about susceptibility to health problems: Conclusions from a community-wide sample. J Behav Med. 1987;10(5):481-500.

16. Edwards A, Elwyn G, Mulley A. Explaining risks: turning numerical data into meaningful pictures. BMJ. 2002;324(7341):827-30.
17. Jordan RG, Murphy PA. Risk assessment and risk distortion: finding the balance. J Midwife Womens Health. 2009;54(3):191-200.
18. Gray BA. Hospitalization history and differences in self-rated pregnancy risk. West J Nurs Res. 2006;28(2):216-29
19. Holten L, de Miranda E. Women s motivations for having unassisted childbirth or high-risk homebirth: An exploration of the literature on 'birthing outside the system'. Midwifery. 2016;38:55-62.
20. Patterson K. Experience of risk for pregnant black women. J Perinatol. 1993;13(4):279-84.
21. Lee S, Ayers S, Holden D. Risk perception of women during high-risk pregnancy: a systematic review. Health Risk Soc. 2012;14(6):511-31.
22. Heaman M, Gupton A, Gregory D. Factors influencing pregnant women's perceptions of risk. MCN Am J Matern Child Nurs. 2004;29(2):111-6.
23. Atkinson SJ, Farias MF. Perceptions of risk during pregnancy amongst urban women in northeast Brazil. Soc Sci Med. 1995;41(11):1577-86.
24. Harrison MJ, Kushner KE, Benzies K, Rempel G, Kimak C. Women's satisfaction with their involvement in health care decisions during a high-risk pregnancy. Birth. 2003;30(2):109-15.
25. Papiernik E, Tafforeau J, Richard A, Pons JC, Keith LG. Perception of risk, choice of maternity site, and socio-economic level of twin mothers. J Perinat Med. 1997;25(2):139-45.
26. Choudhury N, Ahmed SM. Maternal care practices among the ultra-poor households in rural Bangladesh: a qualitative exploratory study. BMC Pregnancy Childbirth. 2011;11(1):1-8.
27. Rajbanshi S, Norhayati MN, Nik Hazlina NH. Risk perceptions among high-risk pregnant women in Nepal: a qualitative study. BMC Pregnancy Childbirth. 2021;21:1-8.

Cite this article as: Borah R, Roychoudhury P, Yesmin S. Risk perceptions among high-risk pregnant women in an aspirational district of India: a qualitative study. Int J Community Med Public Health 2023;10:2479-85.