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Research Article

A Descriptive Study to Assess the Knowledge and Attitude Regarding Birth Preparedness and Complication Readiness (BPACR) among Males in Selected Community of New Delhi

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A B S T R A C T

Introduction: BPACR is a key component of internationally acknowledged safe motherhood programs, which helps to promote the prompt utilization of specialized maternal and neonatal health care and to reduce delays that happens when mothers in labor experience obstetric complications.

Objective: The essential goal of study is to survey the knowledge and attitude with respect to BPACR among males.

Methodology: A descriptive study was conducted and data was collected from 100 married males whose wives were pregnant and who were attending Primary Health Centre of Tughlakabad, New Delhi, using standardized knowledge questionnaire from BPACR matrix by Johns Hopkins Program for International Education in Gynaecology and Obstetrics (2004) and attitude scale.

Results: Data was analyzed using descriptive and inferential measurements concerning frequency, percentage, mean, median and standard deviation which revealed that out of 100 males, 90% had adequate knowledge, 10% had inadequate knowledge. More than half i.e., 65% had a neutral attitude, 34% had a favorable attitude and only 1% had an unfavorable attitude regarding BPACR.

Conclusion: The study concluded that community participation and medical care suppliers together can work in the space of maternal and child health wellbeing ought to work together to enhance the male's attitude regarding BPACR.

Keywords: Birth Preparedness And Complication Readiness, Knowledge, Attitude, Male, BPACR, Antenatal Mother, Maternal And Child Wellbeing, Pamphlet

Introduction

The most pivotal component of national health is maternal and child health. To advance the brief utilization of specialized maternal and neonatal health care, a comprehensive strategy dubbed "birth preparedness and complication readiness" has been created. Knowing danger markers, having a birth plan, sorting out a birth attendant, setting up for transportation, and making financial arrangements are all vital.[1] Around the world, hardships during pregnancy and delivery still result in more than 500,000 women passing on each year. Almost 10% of the appraisals of maternal mortality worldwide come from India.[2] To turn around this disturbing pattern, the International Conference on Population and Development (ICPD) prescribed that endeavors be made to underline men's education and support their dynamic cooperation in maternal care.[3] To address delays at different levels, including the pregnant women, her family, her community, medical services experts, medical care offices, and policy-makers during pregnancy, labor, and the post-pregnancy time frame, the Maternal and Neonatal Wellbeing (MNH) Program of the Johns Hopkins Program for International Education in Gynecology and Obstetrics (JHPIEGO) fostered the birth-readiness and complication preparation (BPACR) matrix.[4]

For each 100,000 live births, the overall maternal mortality extent (MMR) dropped from 422 (358-505) in 1980 to 320 (272-388) in 1990 to 251 (221-289) in 2008. A 1.3% yearly decrease in the MMR has been happening starting around 1990 (1.0-1.5). Over half of all maternal fatalities happened in these six nations in 2008. Afghanistan, Ethiopia, the Popularity-Based Republic of the Congo, Pakistan, India, and Nigeria.[5] India's MMR increased to 103 in 2017–19 from 113 in 2016–18. According to recent statistics from WHO/ UNICEF, India accounts for 12% of worldwide maternal mortality, coming in second only to Nigeria (23%) in this category. The General Registrar of India's 103rd MMR Special Bulletin was published in March 2022.[6] With this continuous downfall, India is practically sure to accomplish the National Health Policy (NHP) objective of 100/lakh live births by 2020 and is without a doubt on target to accomplish the Sustainable Development Goal (SDG) focus of 70/lakh live births by 2030. However, in Indian society, pregnancy and delivery are still perceived as exclusively female issues, despite the fact that males are seen as the primary decision-makers and funders for women's health.[7] As a result, since her husband is not participating in her care, proper judgments on a woman's access to treatment for an obstetric emergency, which might have devastating consequences, cannot be made. Males can have a significant role in lowering maternal mortality and improving mother health by learning more.

The Overall Safe Motherhood Initiative (SMI) was made to raise public consciousness of the degree and impacts of poor maternal well-being and to motivate activity to diminish the high rates of morbidity and mortality welcomed on by pregnancy and delivery issues. In the initial five to a decade after the initiatives' send-off in 1987, a few public safe parenthood drives zeroed in on preparing trained birth attendants (TBAs) and risk screening during pre-birth care as the key mediations. The protected parenthood community has been given an illustrative model of maternal mortality by Thaddeus and Maine (1994), which highlights delays in decision-making, seeking treatment, reaching it, and receiving it as the primary causes of maternal demise. This informative model, sometimes referred to as the "Four Delays Model," divides delays into four categories: delays in recognizing the need for treatment, delays in making the decision to seek care, delays in getting to care, and delays in obtaining sufficient and appropriate care once at the point of service.[8]

In 2013, the JHPIEGO worked with local communities on the BPACR initiative in the Boane area of Mozambique. The study encouraged 490 couples in Boane to make choices about their reproductive health jointly, such as arranging for transportation to a health facility, by addressing crucial delays in obtaining treatment and highlighting the significance of men's participation in family health. This research focuses in particular on male engagement through wooing partners who were first reticent. Men are now more accountable for and proud of safeguarding their families as a result of this effort. As a consequence, since the initiative's launch in 2013, men's prenatal care engagement has grown more than threefold: from 9% (179 out of 1,997 women) in February 2014 to 29% (489 out of 1,700) in February 2016, with an average of 20% male involvement.[9]

In programs supporting EmOC, birth readiness involves planning to have the cleanest, most secure childbirth possible, whether at the woman's home, in a well-being facility, or elsewhere. Finding a prepared provider and making the expected arrangements to get talented consideration for each birth are important for birth status in a skilled care approach. Both systems place a strong emphasis on the need for specialist care, at least in times of emergency; as a result, both include a similar component that deals with being prepared for complications. Programs like EmOC might provide greater focus to preparing for problems than for labor preparation.[4]

Objectives

The primary objective of the study is to assess the knowledge and attitude regarding birth preparedness and complication readiness among males in a selected community. To develop and disseminate an informational

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pamphlet on the BPACR program to decrease maternal complications and advance well-being among families in a selected community.

Methodology

Research design: A quantitative and non-experimental research approach with a descriptive survey design was taken on to achieve the goals of the review. A total of 100 married males whose wives were pregnant and who were attending the Primary Health Center of the selected community, New Delhi, during the period from December 2022 to January 2023 were purposefully chosen. Informed and written consent was taken from males who took part in the review. A knowledge questionnaire and attitude scale in Hindi and English as preferred by the males of the selected community were used. Data was analyzed using descriptive and inferential measurements concerning frequency, percentage, mean, median, and standard deviation.

Ethical consideration

Safeguarding human rights is a crucial ethical consideration when conducting research. The rights of the participants were secured by the following initiatives.

- A formal written permission was obtained from the concerned managerial authority of the DHA of the urban community.
- Ethical permission was taken from the Institutional Ethical Review Board of Jamia Hamdard.
- Informed and written consent was obtained from males who participate in the study.
- Anonymity and confidentiality of the subjects was maintained while carrying out the study.

Questionnaire

- **Socio- Demographic Characteristics:** A demographic profile was prepared, which comprises 14 items for assessing background data of males. The sample characteristics were described in terms of age, education level, religion, occupation, monthly income, family structure, number of living children, residential area, stillbirth, health facility used, proximity to the health facility, registration, abortion, and previous use of family planning.
- **Knowledge Questionnaire:** A modified self-structured e-questionnaire based on the BPACR matrix by the Johns Hopkins Program for Global Training in Gynecology and Obstetrics (2004) was intended to accumulate the information in quantitative areas to assess men's knowledge on birth planning and difficulty status. There were 7 indicators. The first indicator of knowledge about ANC treatment consists of 5 questions. There are 10 questions in the second indicator, which deals with knowledge of pregnancy hazard signals. The fourth indicator was a method of transportation, followed by the third sign (competent birth attendant). The Janani Suraksha Yojana (JSY), the Janani Shishu Suraksha Karyakaram (JSSK), and the conserving money for pregnancy-related costs are the fifth, sixth, and seventh indicators, respectively. The responses were scored from 0 to 1. Each positive response contains a score of 1, and each negative response contains a score of 0. Knowledge about >3 essential ANC cares was scored as 1. Knowledge about >8 dangerous signs of pregnancy care was scored 1. The rest of the indicators contain a score of 1 for a positive response and a score of zero for a negative response. Add up scores for each indicator to get a total. Minimum Score: 00 & Maximum Score: 07
- **Attitude scale:** Male attitudes towards birth preparation and complication readiness were evaluated using a Likert scale. It comprises 10 statements, five of which are favourable and five of which are unfavourable, on how men in the targeted group feel about being ready for complications and for giving birth. A Likert scale with five possible values was used and scored as Strongly Agree: 05, Agree: 04, Neutral: 03, Disagree: 02, and Strongly Disagree: 01.

The score ranged from 10 to 50. Out of 10, 5 items (1, 3, 5, 7, and 9) were positive, and 5 items (2, 4, 6, 8, and 10) were negative. Negative things received reversal scoring.

Validity and Reliability: To ensure the content validity of the content of the tools, it was given to 7 experts based on their clinical and academic expertise, experience, qualifications, and interest in the problem area for content validation. Specialists were mentioned to pass judgment on the items in view of significance, clarity, possibility, and association of items. 5 items in the criteria rating scale were marked 'fully met' by all 7 (100%), 'partially met' by 1 (14.28%), and 'not met' by none of the experts. The tools were found to be valid with a few corrections, which were duly incorporated, and the final draft of the tools was prepared. Reliability of the information survey was determined utilizing the KR-20 formula, and it was found to be 0.74, which was reliable for the study. Reliability of the attitude scale was determined utilizing Cronbach's alpha formula, and it was found to be 0.70, which was reliable for the study.

Table 1. Interpretation Of Knowledge Scores

Scoring range	Interpretation
0 -2	Inadequate BPACR status
3 -7	Adequate BPACR status

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Table 2.Interpretation Of Attitude Scores

Scoring range	Interpretation
10- 22	Unfavorable attitude
23- 36	Neutral attitude
37- 50	Favorable attitude

Data Analysis

Data was exported from the Google form into Microsoft Excel for comparing variables; descriptive and inferential statistics such as frequency, percentage, and standard deviation were used. The information was recorded into a master datasheet, arranged, and then examined in light of the study's goals. The following plan for analysis was developed with expert opinion:

- Calculation of frequency and percentage of demographic characteristics of males by age, educational status, religion, occupation, monthly income, family structure, number of living children, residential area, stillbirth, health facility used, distance to health facility, registration, abortion, and family planning used in the past.
- Computation of frequency and percentage of BPACR score (BPACR score 0-2 was considered inadequate knowledge and 3-7 was considered adequate knowledge)
- Computation of frequency percentage of BPACR score (BPACR score 10-22 was considered as unfavorable attitude, 23-36 was considered as neutral attitude, and 37-50 was considered as favorable attitude).

Results

Table 3.Frequency And Percentage Distribution Computed For Describing The Demographic Characteristics Of Males

S. No.	Sample Characteristics	Category	Frequency (n=100)	Percentage (%)
1	Age of the male (in years)	<20	5	5%
		21–25	46	46%
		26–30	27	27%
		31–35	22	22%
2	Educational status of the male	Illiterate	0	0%
		Primary education	32	32%
		Secondary education	24	24%
		Graduate/Postgraduate	44	44%
3	Religion	Hindu	48	48%
		Muslim	19	19%
		Christian	4	4%
		Others	29	29%
4	Occupational status	Unemployed	8	8%
		Self-employed	39	39%
		Private service	40	40%
		Government service	13	13%
5	Monthly household income (₹)	<5,000	8	8%
		5,001–10,000	35	35%
		10,001–20,000	31	31%
		>20,000	26	26%
6	Number of currently living children	None	31	31%
		One	49	49%
		Two	14	14%
		Three and above	6	6%

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7	Residential area	Rural	7	7%
		Urban	93	93%
8	Previous stillbirth	Yes	27	27%
		No	73	73%
9	Type of family	Nuclear	47	47%
		Joint	50	50%
		Extended	3	3%
10	Health facility used during pregnancy	Primary Health Centre	43	43%
		Secondary Health Centre	14	14%
		Tertiary Health Centre	43	43%
11	Distance to health facility (km)	Less than 1	63	63%
		1–5	30	30%
		More than 5	7	7%
12	Wife registered her name with any hospital or doctor	Yes	86	86%
		No	14	14%
13	Abortion history	Yes	10	10%
		No	90	90%
14	Family planning used in the past	Yes	43	43%
		No	57	57%

Table 4.Frequency, Percentage, Mean, Median And Standard Deviation Of Score To Identify The Knowledge Regarding Bpacr Among Males Of Selected Community

Knowledge category	Percentage	Mean	Median	Standard deviation
Inadequate (0-2)	10%	4.76	5	1.64
Adequate (3 -7)	90%			

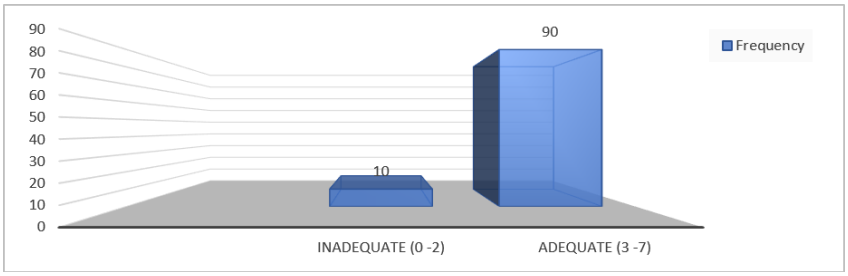

Figure 1.Bar Diagram Showing The Frequency Of Males As Per Their Level Of Knowledge Regarding Birth Preparedness And Complication Readiness (Bpacr).

Table 5.Frequency, Percentage, Mean, Median And Standard Deviation Of Score To Identify The Attitude Regarding Birth Preparedness And Complication Readiness (Bpacr) Among Males Of Selected Community

Attitude category	Score Range	Percentage	Mean	Median	Standard Deviation
Unfavorable attitude	10- 22	1%	34.67	35	3.98
Neutral attitude	23- 36	65%			
Favorable attitude	37- 50	34%			

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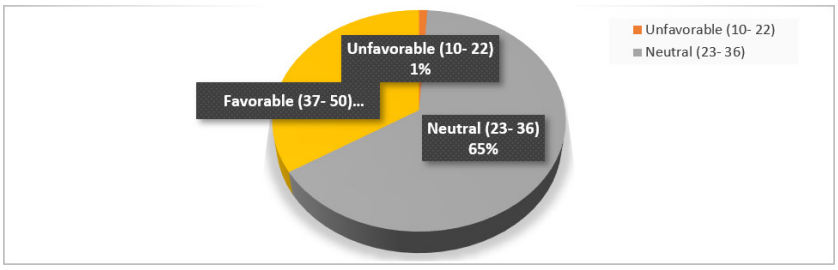

Figure 2.A Pie Diagram Showing The Frequency And Percentage Of Males By Their Level Of Attitude Regarding Birth Preparedness And Complication Readiness (Bpacr).

Implications

- Health education at PHC or during home visits regarding BPACR
- Individual counseling regarding BPACR
- Similar studies in another setting with another group of clients
- In-service education for nursing personnel & teaching programmes for nursing students.
- Assists with figuring out the enormous role of spouse in BPACR.
- Helps health policy maker to understand about involvement of male partner in maternity care.
- Recommend the hospital policy to practice husband participation for better access of maternity care.

Discussion

The results of the current research showed that 65% of men had chosen a trained birth attendant for delivery, 76% had chosen a mode of transportation, and 67% had saved money to cover pregnancy-related costs. Most men were also aware of vaginal bleeding (82.8%), decreased fetal movement (86.9%), vaginal leakage (79.8%), palpitations, easily becoming exhausted, and dyspnea (80.8%), high temperature (77.6%), blurred vision (59.6%), severe headache (30.3%), and swollen legs and faces (22%). It is consistent with Swain's D10 research on preparation for complications and birth readiness. In a remote area of Odisha, India, men are willing to help in childbirth; relatively little money was saved for emergencies (19.5%), labor transportation (24.2%), or expert care after birth (6.2%). Additionally, awareness of the following factors: bleeding (51.5%), baby stops moving (14%), water breaks prior to labor pains (13%), trouble breathing (6%), high temperature (8%), dizziness/blurred vision (11%), severe headache (9%), and swelling in leg and face (22%).

According to the study's results, most participants (44%) had >3 prenatal visits (83%) and lived <1 km (63%) from a healthcare institution. Most males exhibited neutral attitudes towards arranging for a blood donor in the event of a complication (36.0%), choosing a skilled care provider (22.2%), planning for a place to give birth (24.0%), and arranging for transportation (75.8%). 90% of the research samples showed sufficient understanding about BPACR. Gultie T. et al[11] performed a community-based cross-sectional survey among 421 men whose wives had birth during the previous 12 months in the Kucha district, Gamo Zone, Southern Ethiopia, on December 28, 2021. According to the research, participants who resided less than five kilometers from the medical institution (65.0%), had at least four prenatal care visits, and had at least a secondary school education (22.1%). Findings showed that most husbands were not involved in BPACR (69.8%), despite the majority of men having good knowledge of BPACR (92.1%). For example, husbands were not involved in choosing a skilled care provider (95.2%), planning where to give birth (58.7%), setting up transportation (75.8%), or setting up a blood donor in case of complications (98.3%).

According to the research's results, most of the study samples were private workers (40%), lived in metropolitan regions (93%), and practiced the Hindu religion (48%). Most participants, or 79.8%, were aware of obstetric risk signs including vaginal bleeding, and 55% of them held attitudes that were highly in favor of husbands going with their women to the hospital during the prenatal time. It contrasts with research conducted by Gize A. et al[12] in Burayu town, Oromia region, Ethiopia, from May to July 2016 on men's awareness and engagement on obstetric risk signals, birth preparation, and complication readiness. According to the survey, many participants were private workers (34.2%), lived in metropolitan regions (78.2%), and practiced orthodox religion (37.9%). While 61.4% of the participants were men, most participants (87%) did not know about obstetric warning signs, including vaginal hemorrhage.

Conclusion

The study concludes that adequate knowledge and neutral attitude regarding BPACR was prevalent among males in the current study. Hence, community support and medical care suppliers can cooperate in the space of maternal and child wellbeing to enhance the male's attitude regarding BPACR.

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Recommendations

- A similar study can be reproduced on a larger sample for better generalization.
- A comparable report can be conducted in rural areas regarding BPACR.
- A cross sectional study can be conducted in other parts of the country to assess the knowledge and attitude of males and females regarding BPACR.
- A review can be led to find out the effect of the individual counseling about BPACR on married males and females.
- Findings of research study can be shared with the office of hospital administration.

Ethical clearance

Ethical permission was taken from the concerned administrative authority of the DHA of the urban community and Institutional Ethical Review Board of Jamia Hamdard. Informed and written consent was obtained from males who participate in the study. Anonymity and confidentiality of the subjects was maintained while carrying out the study.

Limitations

The study was conducted on a small sample and limited to only a selected community of New Delhi; therefore, generalization cannot be made.

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