

A Comparative Study Between Primiparous and Multiparous Mothers to Assess Knowledge and Practice Regarding Postnatal Care in A Selected Hospital of Varanasi District

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Abstract:

Background: A comparative descriptive survey approach was adopted to “compare between primiparous and multiparous mothers to assess knowledge and practice regarding postnatal care.

Methodology: The Design used in the Study was Comparative Descriptive Design. The Study was Conducted in Selected Hospital of Varanasi. Non-Probability Purposive sampling technique was used to select 30 primiparous and 30 multiparous mothers. The data was collected by using a closed-ended structured knowledge and practice questionnaire. The obtained data was analyzed by using descriptive and inferential statistics.

Result: The knowledge assessment of primiparous mothers, the mean percentage of response was (42.46%). Area-wise mean percentage was (38.88%) in the area of postnatal exercise, (55.37%) in the area of postnatal diet, (47.20%) in the area of newborn care, and (21.88%) in the area of family planning. With regard to the knowledge score of multiparous mothers, the mean percentage of response was (61.86%). Area-wise mean percentage was (50.33%) in the area of postnatal exercise, (66.62%) in the area of postnatal diet, (72.79%) in the area of newborn care and (40%) in the area of family planning. With regard to item-wise analysis, the highest percentage of score in primiparous (36.66%) and in multiparous mothers (96.66%) was observed for the item ‘baby can be protected from illness by giving immunization’. Using unpaired ‘t’ test tested further difference of knowledge score. A very high score ($P < 0.001$) difference was found between the knowledge score of primiparous and multiparous mothers indicating significant increase in knowledge as the parity increases. Hence, Null hypothesis H_0 was rejected and the research hypothesis H_1 was accepted. The overall findings of the study revealed that there is significant increase in the knowledge of multiparous mothers regarding postnatal care.

Keywords: Primiparous mothers; multiparous mother; postnatal care

Introduction:

Pregnancy and childbirth are the most important events in a woman’s life. However, many mothers and/or health staff might neglect the importance of postnatal care. (1) It will also exert a positive effect on the

mothers' knowledge and improvement of their self-efficacy. (2) The World Health Organization has also emphasized the importance of the care provided to mothers during the postpartum period. In this period, sufficient training can be provided to mothers about their own as well as their neonates' health status. (3) Mothers, as the primary care providers to their neonates, should be aware of the necessary neonatal care including feeding, hygiene, vaccination, and signs of sickness. It is of great importance to make mothers aware of the necessary care for their own health, as well. Such care includes nipple care, personal hygiene, vaginal hemorrhage, infection, and warning signs, which can be effective in reducing the mothers' morbidity and mortality.(6) Although referral to health centers for receiving postnatal care has been strongly recommended,(7) There are several barriers against the timely referral of mothers such as mother's disabilities and presence of another child at home.(8)

Need of the study: Caesarean section is one of the commonly performed surgical procedures in obstetric and is certainly one of the oldest operations in surgery(4). Recently there has been a dramatic rise in the caesarean section rate worldwide especially in the developed countries(5).

Aim: To compare between primiparous and multiparous mothers to assess knowledge and practice regarding postnatal care in a selected hospital of Varanasi.

Objectives:

- Determine the knowledge and practices of primiparous and multiparous mothers regarding postnatal care through a structured questionnaire.
- Compare the knowledge and practices between primiparous and multiparous mothers in terms of postnatal exercise, postnatal diet, newborn care and family planning.
- Find association of knowledge and practices between primiparous and multiparous mothers with selected demographic variables.

Operational Definitions:

Knowledge: Knowledge is defined as awareness or familiarity gained by experience of a fact or situation (Oxford English Dictionary). In this study knowledge refers to the correct response from the respondent regarding postnatal care as elicited through structured questionnaire.

Practice: In this study practices refers to the habitual action of the people during postnatal period.

Postnatal care: In this study postnatal care refers to the care of the mother during Puerperium in terms of postnatal exercise, postnatal diet, newborn care and family planning.

Postnatal practices: In this study postnatal practices refers to the practices followed by the mother during postnatal period.

Primiparous women: In this study primiparous women refers to the women who has delivered a live baby for the first time.

Multiparous women: In this study multiparous women refers to the women who has delivered live babies for the second time.

Assumption: There will be more knowledge regarding postnatal care in Multiparous women rather than primiparous women.

Hypothesis:

Hypothesis will be tested at 0.001 level of significance.

H₀: There is no significant difference on knowledge scores between the primiparous and multiparous mothers.

H₁ : The mean knowledge scores of multiparous mothers will be significantly higher than the mean knowledge score of primiparous mother.

Conceptual Framework:

The Conceptual framework of the study was developed based on Rosentoch's health belief model. This theory was applied to the study framework to compare the knowledge and practices of primiparous and multiparous mothers regarding postnatal care. This model represents the relationship between a person's belief and behaviors. It provides a way of understanding and predicting how clients will behave in relation to their health and how they will comply with health care therapies.

Methodology:

Research Approach: A Descriptive approach was Considered Most Effective to compare between primiparous and multiparous mothers to assess knowledge and practice regarding postnatal care.

Research Design: Comparative Descriptive Survey Research Design was used to assess knowledge and practice regarding postnatal care.

Research Setting: Based on the Feasibility of conducting the study and availability of samples, main Study was conducted at Kamla Nursing Home, Ramnagar, Varanasi.

Population: The Target Population for the Study was Sample consisted of 30 primiparous and 30 multiparous Woman.

Sample: In this Study Samples are primiparous and multiparous Woman admitted in Selected hospital of Varanasi.

Sample Size: In this Study the Investigator Selected 30 primiparous and 30 multiparous Woman for the study.

Sampling Technique: In this Study the investigator used Non Probability – Purposeive sampling Technique.

Criteria for Selection of Samples:

Inclusion criteria: Postnatal women who were

- Primi and second parous women
- delivered a live baby
- able to read and understand Hindi and English
- willing to participate in the study.
- available at the time of data collection.

Exclusion criteria: Postnatal women who were:

- having high risk babies.
- not co-operating / Willing to participate with researcher
- women who cannot read and understand Hindi and English

Content Validity: Content Validity of tool was obtained on the basis of Specialized Opinion from different Expert from different field comprising of 2- Obstetrician, 5 – Nursing experts in Obstetrics & Gynecology Nursing, 1- Nursing expert in Child Health Nursing.

Reliability of Tool: Reliability of the tool was tested by split-half method. The questionnaire was administered to 5 primiparous and 5 multiparous women other than the study sample. Reliability of the tool was tested by using Karl Pearson’s correlation formula ($r^{1/2} = 0.84$). hence the tool was found reliable and feasible.

Ethical Consideration: Ethical Permission was taken the institutional research ethical committee. Administrative Permission was taken from the Head of the organization, Kamla Nursing home, Varanasi. Informed Consent was taken from the samples and assured that the confidentiality would be maintained on the given information.

Pilot Study: A pilot study was conducted by administering the structured questionnaire to ten respondents who fulfilled the sampling criteria. The tool was found to be feasible and reliable.

Development of the tool

Tool to assess the knowledge and practice of primiparous and multiparous mothers regarding postnatal care. A closed-ended structured knowledge and practice questionnaire is prepared on the basis of literature reviewed and in consultation with the experts in the field of Nursing, Obstetrics and Gynecology.

Description of the tool

The questionnaire had two parts Part I and Part II.

Part I – Demographic proforma: It consists of ten items, which were used to collect the sample characteristics includes age, educational status, religion, employment, type of family, income of the family per month, marriage duration and area of residence.

Part II – Knowledge and practice questionnaire: Each multiple choice had four options with Each item had a score of one for correct answer and zero for wrong answer. The maximum score was 50.

Part II consists of closed-ended questions to determine the knowledge and practice of primiparous and multiparous women regarding postnatal care. It has four sections.

- Section A - Consists of 9 items regarding postnatal exercise.
- Section B - Consists of 8 items regarding postnatal diet.
- Section C - Consists of 24 items regarding newborn care.
- Section D - Consists of 9 items regarding family planning.

Discussion: A comparative study with survey approach was conducted to assess the knowledge and practice of postnatal mothers regarding postnatal care. The data was collected from 30 primiparous and 30 multiparous mothers from a selected hospital in Varanasi. Collected data was analysed by using descriptive and inferential statistics and presented in the form of tables and graphs.

PART - I

PERCENTAGE DISTRIBUTION OF THE DEMOGRAPHIC VARIABLES

Table 1: Frequency and percentage distribution of postnatal mothers according to demographic variables.

Sl. No.	Variables	Primiparous (n=30)		Multiparous (n=30)	
		Frequency	Percentage(%)	Frequency	Percentage (%)
1	Age (year)				
	<20	3	10	-	-

	20-25	18	60	1	3.33
	26-30	9	30	22	73.34
	31-35	-	-	7	23.33
	> 36	-	-	-	-
2.	Educational Status				
	HighSchool	-	-	4	13.33
	Higher Secondary	13	43.34	13	43.34
	Graduate	11	36.66	12	40
	Postgraduate & technical	6	20	1	3.33
3.	Religion				
	Hindu	6	20	9	30
	Muslim	11	36.67	12	40
	Christian	13	43.33	9	30
4.	Employment				
	Unemployed	20	66.67	22	73.33
	Semiskilled	4	13.33	8	26.67
	Professional	6	20	-	-
5.	Type of family				
	Joint family	20	66.67	11	36.67
	Nuclear family	6	20	14	46.67
	Extended family	4	13.33	5	16.66
6.	Family income				
	< Rs. 1000	-	-	-	-
	Rs. 1001-3000	-	-	-	-
	Rs. 3001-5000	9	30	17	56.67
	> Rs. 5000	21	70	13	43.33
7.	Duration of marriage				
	0-3 years	22	73.33	12	40
	3-5 years	8	26.67	15	50
	5-7 years	-	-	3	10
	Above 7 years	-	-	-	-
8.	Area of residence				
	Urban	23	76.67	20	66.67
	Rural	7	23.33	10	33.33

Table 1: Represents the distribution of respondents according to age, education, religion, employment, type of family, family income, duration of marriage and area of residence in terms of frequency and percentage.

PART - II

ANALYSIS OF KNOWLEDGE OF POSTNATAL MOTHERS REGARDING POSTNATAL CARE

Section A: Determining the level of knowledge of postnatal mothers regarding postnatal care

In order to find out the level of knowledge of postnatal mothers, a three-point scale was used. Postnatal

mothers who scored between 0 to 35% were referred to have poor level of knowledge, 35-70% average and 70-100 % were having good level of knowledge.

Table 2: Analysis of level of knowledge of primiparous and multiparous mothers regarding postnatal care.

Level of knowledge	Percentage of score	Primiparous		Multiparous	
		No. respondents	Percentage	No. respondents	of %
Poor	0-35	8	26.67	1	3.33
Average	35-70	21	70	21	70
Good	70-100	1	3.33	8	26.67
Total		30	100	30	100

Assessment of knowledge Level of primiparous mothers Signifies that highest percentages of the respondents (70%) had only average knowledge with their percentage scores ranging between 35-70 while on the other hand 26.67 % had poor knowledge whose percentage of score fell between 0-35%. Only 3.33% of primiparous mothers had good knowledge whose score ranged between 70-100%.

Assessment of knowledge level of multiparous mothers shows that the highest percentages of the respondents (70%) had only average knowledge whose score ranged between 35-70% and 3.33% had poor knowledge whose score ranged between 0-35%. Only 26.67% had good knowledge regarding postnatal care whose percentage of score ranged between 70-100%.

Section B: Area-wise mean, SD, and mean percentage of knowledge scores of postnatal mothers regarding postnatal care.

Table 3: Distribution of sample (primiparous mothers) according to area-wise mean, SD and mean percentage of knowledge.

Knowledge area	Maximum possible score	Mean score	SD	Mean %
Postnatal exercise	9	3.5	1.48	38.88
Postnatal diet	8	4.43	1.25	55.37
New born care	24	11.33	3.08	47.20
Family planning	9	1.97	1.33	21.88
Total	50	21.23	5.41	42.46

The total mean percentage of knowledge score was 42.46% with mean \pm SD of 21.23 ± 5.41 . Area-wise mean percentage of the knowledge scores was 38.88% in the area of ‘postnatal exercise’ with mean \pm SD of 3.5 ± 1.48 . In the area of ‘postnatal diet’ the mean percentage was 55.37% with mean \pm SD of 4.43 ± 1.25 . In the area of ‘new born care’ the mean percentage was 47.20% with mean \pm SD of 11.33 ± 3.08 . In the area of ‘family planning’ the mean percentage was 21.88% with mean \pm SD of 1.97 ± 1.33 .

Table 4: Distributions of sample (multiparous mothers) according to area-wise mean, SD and mean percentage of knowledge scores.

Knowledge area	Maximum possible score	Mean score	SD	Mean %
Postnatal exercise	9	4.53	1.81	50.33
Postnatal diet	8	5.33	1.49	66.62
New born care	24	17.47	2.81	72.79
Family planning	9	3.6	1.63	40
	50	30.93	5.41	61.86

The total mean percentage of the knowledge scores was 61.56% with mean \pm SD of 30.93 ± 5.41 . Area-wise mean percentage of knowledge scores was 50.33% in the area of ‘postnatal exercise’ with mean \pm SD of 4.53 ± 1.81 . In the area of ‘postnatal diet’ the mean percentage was 66.62% with mean \pm SD of 5.33 ± 1.49 . In the area of ‘newborn care’ the mean percentage was 72.79% (highest) with mean \pm SD of 17.47 ± 2.81 . The mean percentage for ‘family planning’ was 40% (least) with mean \pm SD of 3.6 ± 1.63 .

Part III

COMPARISON OF KNOWLEDGE SCORE OF PRIMIPAROUS AND MULTIPAROUS MOTHERS ON POSTNATAL CARE

Section A: Comparison of primiparous and multiparous mothers knowledge scores.

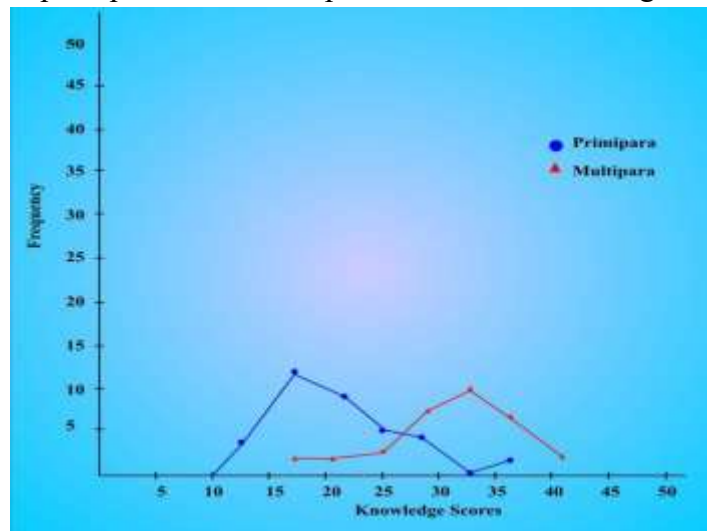


Fig: 1: Primiparous and multiparous knowledge scores on postnatal care

Fig 1: The Graph represents that multiparous mothers had more knowledge than primiparous mothers. In primiparous mothers the maximum score is between 15-19 and in case of multiparous mothers the maximum score is between 31-35. None of the primiparous mothers scored above 37 whereas multiparous mothers have scored up to 43. Hence from the above findings it can be concluded that multiparous mothers have more knowledge than primiparous.

Section B: Quartile distribution of knowledge scores of primiparous and multiparous mothers on postnatal care.

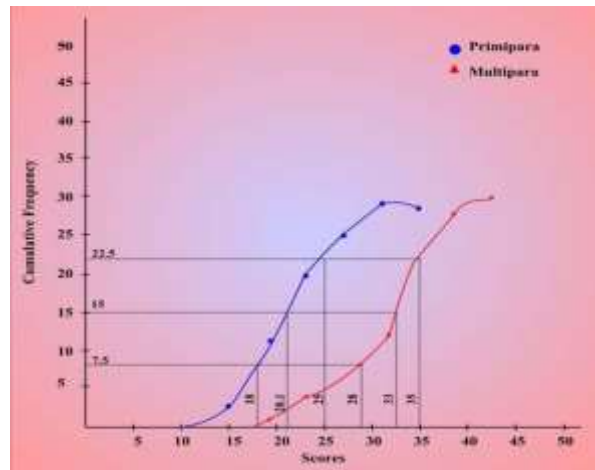


Fig 2: Less than Ogives of primiparous and multiparous knowledge scores of postnatal mothers on postnatal care.

The Represented data in the above Ogive shows significant difference between primiparous and multiparous mothers knowledge scores. By graphical presentation the primiparous median score is 20.1 whereas multiparous median score is 33. The ogive plotted shows that first quartile score of multiparous mothers is higher than the third quartile score of primiparous mothers and there was a large gap between all the quartile of primiparous and multiparous mothers knowledge scores. However, the difference between the different quartiles of primiparous and multiparous mothers is more. So the ogive indicates that there is significant increase in the knowledge scores of multiparous mothers.

Section C: Area-wise mean, SD and mean percentage of the knowledge scores in primiparous and multiparous mothers on postnatal care

Table 5: Area-wise mean, SD and mean percentage of the knowledge scores in primiparous and multiparous mothers on postnatal care.

Knowledge area	Maximum possible score	Primiparous		Multiparous	
		Mean □ SD	Mean (%)	Mean □ SD	Mean (%)
Postnatal exercise	9	3.5 □ 1.48	38.88	4.53 □ 1.81	50.33
Postnatal diet	8	4.43 □ 1.25	55.37	5.33 □ 1.49	66.62
Newborn care	24	11.33 □ 3.08	47.20	17.47 □ 2.81	72.79
Family planning	9	1.97 □ 1.33	21.88	3.6 □ 1.63	40.00
Total	50	21.23 □ 5.41	42.46	30.93 □ 5.41	61.86

The total mean percentage of primiparous mothers is 42.46% with mean □ SD of 21.23 □ 5.41 whereas of multiparous mothers mean percentage is 61.86% with mean □ SD of 30.93 □ 5.41. In the area of ‘postnatal exercise’ the mean percentage of primiparous mothers is 38.88% with mean □ SD of 3.5 □ 1.48. whereas in multiparous mothers the mean percentage is 50.33 with mean □ SD of 4.53 □ 1.81. In the area of ‘postnatal diet’ the mean percentage primiparous mothers is 55.37 with mean □ SD of 4.43 □ 1.25 whereas in multiparous mothers the mean percentage is 66.62% with mean □ SD of 5.33 □ 1.49.

In the area of ‘new born care’ the mean percentage of primiparous mothers is 47.20% with mean \pm SD of 11.33 \pm 3.08 whereas of multiparous mothers the mean percentage is 72.79% with mean \pm SD of 17.47 \pm 2.81. In the area of ‘family planning’ the mean percentage of primiparous mothers is 21.88% with mean \pm SD of 1.97 \pm 1.33 whereas in multiparous mothers mean percentages is 40% with mean \pm SD of 3.6 \pm 1.63.

Section D: Area-wise mean, SD and mean percentage of the knowledge scores in primiparous and multiparous mothers on postnatal care.

Table 6: Area-wise mean, SD and mean percentage of the knowledge scores in primiparous and multiparous mothers on postnatal care.

Knowledge area	Maximum possible score	Primiparous		Multiparous	
		Mean \pm SD	Mean (%)	Mean \pm SD	Mean (%)
Postnatal exercise	9	3.5 \pm 1.48	38.88	4.53 \pm 1.81	50.33
Postnatal diet	8	4.43 \pm 1.25	55.37	5.33 \pm 1.49	66.62
Newborn care	24	11.33 \pm 3.08	47.20	17.47 \pm 2.81	72.79
Family planning	9	1.97 \pm 1.33	21.88	3.6 \pm 1.63	40.00
Total	50	21.23 \pm 5.41	42.46	30.93 \pm 5.41	61.86

Testing of hypothesis

H₀: There is no significant difference on knowledge scores between the primiparous and multiparous mothers.

H₁ : The mean knowledge scores of multiparous mothers will be significantly higher than the mean knowledge score of primiparous mother.

Table 7: Significant difference in knowledge score of primiparous and multiparous mothers regarding postnatal care.

n=60

Knowledge area	Mean difference	‘t’ value	‘p’ value	Level of significance
Section –A: Postnatal exercise	1.03	2.417	0.019	Significant
Section –B: Postnatal diet	0.9	2.531	0.014	Significant
Section –C: Newborn care	6.13	8.057	0.000	Very Highly Significant
Section -D: Family planning	1.63	4.275	0.000	Very Highly Significant
Total	9.7	6.945	0.000	

The above Findings reveal the significant difference on knowledge scores in section A and section B, while the knowledge scores were very highly significant in section C and section D. Unpaired ‘t’ test was used to compare the knowledge scores of primiparous and multiparous mothers on postnatal care. The calculated values are much higher than the table value and therefore null hypothesis is rejected and the Research Hypothesis is accepted.

Part IV

ASSOCIATION OF KNOWLEDGE OF POSTNATAL MOTHERS REGARDING POSTNATAL CARE WITH SELECTED DEMOGRAPHIC VARIABLES

Table 8: Association between demographic variables and knowledge score of postnatal mothers.

Demographic variables	Degree of freedom	Calculated value (χ^2)	Table value	Level of significance	
Age	1	23.253	10.83	P< 0.001	Highly Significant
Education	1	2.4	3.84	P>0.05	Not Significant
Religion	2	1.869	5.99	P>0.05	Not Significant
Employment	1	2.857	3.84	P>0.05	Not Significant
Type of family	2	0.533	5.99	P> 0.05	Not Significant
Family income	1	0.271	3.84	P>0.05	Not Significant
Duration of marriage	2	17.109	13.82	P<0.001	Highly Significant
Area of residence	1	0.082	3.84	P>0.05	Not Significant

The above data Analysis reveals that there is very high degree of association between the knowledge score and age and duration of marriage. It was also found that there is no significant association between knowledge scores and any of the variables viz., education, religion, employment, type of family, family income and area of residence.

Summary and Conclusion :

- Assessment of the level of knowledge of the primiparous and multiparous women regarding postnatal care shows that highest percentage (70%) had average knowledge and 26.67% of primiparous and 3.33% of multiparous mothers had poor knowledge.
- Area-wise analysis of knowledge score reveals that higher percentage of primiparous (55.37%) had knowledge on the area of ‘postnatal diet’ and least (21.88%) proportion had knowledge on the area of ‘family planning’. Whereas in the case of multiparous mothers highest percentages (72.79%) had knowledge in the area of ‘newborn care’ and least proportion (40%) in the area of ‘family planning’. The total mean percentage of knowledge score in primiparous mothers was 42.46% with mean \pm SD of 21.23 ± 5.41 and the total mean percentage of knowledge score in multiparous mothers was 61.86 with mean \pm SD of 30.93 ± 5.41 .
- The findings of the study showed a very high significant difference exists on the knowledge scores between primiparous and multiparous mothers and the mean difference ($t_{59} = 6.945, P < 0.001$) in the area of ‘newborn care’ and ‘family planning’ and a significant difference in the area of ‘postnatal exercise’ and ‘postnatal diet’. This study also reveals that there is very high significant association between the knowledge score with age and duration of marriage.

Implications:

The present study was conducted to compare the knowledge and practice among primiparous and multiparous mothers regarding postnatal care. Several implications for nursing practice, education, administration and research can be stated based on the findings of the present study.

Nursing practice:

- The present study has revealed the gap between the primiparous and multiparous mother's existing knowledge and practice regarding postnatal care. This indicates that there is a great scope for education in this area. Midwives have an obligation to teach postnatal mothers to promote health/prevent postnatal complications and support health care practices.
- Nurses have a primary responsibility for patient education both in hospital and community.

Nursing Education:

- The nursing curriculum is responsible for preparing the future nurses. The nursing curriculum should lay more emphasis about postnatal care, as lack of postnatal care can cause maternal mortality.
- The learning experience of the students should involve conducting various health education programs in antenatal, postnatal wards and primary health centers.
- They should be made aware of health promotion activities in maternal and child health care.

Nursing Administration:

- Nurse administrators should identify prevailing health problems and organize in-service education program for the nurses working in various departments.
- This will enhance their ability in identifying the learning needs of the clients, planning and conducting educative program for postnatal mothers in the clinical setting and primary health centers.
- Health administrators can develop certain policies concerning periodic survey to identify the health-related problems, to prepare instructional materials and to conduct client education.

Nursing Research:

- Nurse researchers should be made aware about the need for the research in the area of postnatal care and maternal education. This study may form a base for further research in the field.

Recommendations:

- This study can be replicated on a larger sample thereby findings can be generalized for larger population.
- Comparative study can be conducted between urban and rural or between two ethnic groups.
- A study can be conducted using SIM, booklet informative video etc.

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