



STATISTICAL EXPLORATION OF MAJOR DETERMINANTS OF WOMEN'S MATERNAL HEALTH CARE SERVICES IN KALABURAGI

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ABSTRACT This paper deals with statistical analysis of a brief profile of factors of maternal care of mothers of new born babies in Government and Private health centers of Kalaburagi city. The profile includes the socio-demographic factors are namely viz:-Age, education, monthly income, number of children and location and maternity determinants namely viz: type of hospital, mode of trend, time to reach, first visits, health services received, information followed, and delivery attended, attended by, satisfaction from birth service, nature of delivery, expenditure of delivery and overall satisfaction. The analysis of the determinants reveals that most of the respondents are satisfied as per their need in both government and private healthcare facility. This is sign of improvement and development in maternal health services of Kalaburagi city.

KEYWORDS : Demographic Factors, Maternity Service Factors, Frequency and Percentage Distribution.

1.1 Introduction

Women's healthcare service factors have been increasingly recognized as an important outcome for the health care maternity system and are increasingly studied in developing countries. Studies of factors of health care facilities have drawn on theories of behavior that are marketing oriented, experiential and economic. The costs of care are sometime factored into satisfactory rating.

Most of the studies have focused on provisions of maternity services. The assessment of women's healthcare facility service factors in maternity services in government and private hospitals have received very little attention. The need of our study is to determine and analyze the determinants of women's healthcare facility service factors in maternal services. In the present study the assessment of women's healthcare facility service with maternity services factors was determined and analyzed on the factors of their socio-demographic characters.

1.2 Data collection and methodology

For this study we collected data in 30 days using a structural questionnaire which is a crossed sectional survey of 100 women who had utilized maternity services in the past and was conducted at various government and private hospitals in Kalaburagi city.

The questionnaire to understand the level of satisfaction for maternal health services was developed based on socio-demographic factors and determinants of care themes of maternal care identified from review of literature and qualitative study.

For the present study we have surveyed 10 maternity hospitals in Kalaburagi city. A random sample of 100 patients was surveyed and each person was asked to report the Age, Education, Monthly income, Location, Accessibility, Cost and Mode of transport etc.

The collected data further classified and presented based on demographic factors and various determinants of maternal healthcare service factors. The frequency distribution under each category was obtained and preliminary statistical analysis was done.

1.3 Survey of Literature

		Type of healthcare facility centers					
		Government		Private		Total	
		Count	Row N %	Count	Row N %	Count	Row N %
Age of the mothers	27+	10	43.5%	13	56.5%	23	100.0%
	<=21	17	65.4%	9	34.6%	26	100.0%
	22 – 26	23	45.1%	28	54.9%	51	100.0%
	Total	50	50.0%	50	50.0%	100	100.0%

Das P, Basu M, Tikadar T, Biswas G, Mridha, Indian Journal Community Medicine (2010) considered the problem of “women satisfaction on maternal health services” in rural Bengal. The study was conducted to assess the satisfaction of women's receiving maternal health services. In respect of satisfaction, responses of the women's were either satisfactory (54.31%) or good (23.56%) on maternal health services 'poor or very poor around 20% and it was significantly worse in respect of satisfaction'. Most of them (73.31%) expressed satisfactory “response” on the quality of services given by nursing staffs. Mostly satisfactory observations on maternal health services were found in respect of women's satisfaction and there was scope to improve the quality and quantity of services, and accordingly actions may be taken in the working field.

Senarath U, Fernando DN, Rodrigo I, Tropical Medicine & International Health: TM & IH(2006) considered the problem of “Factors determining client satisfaction with hospital-based maternal care in Srilanka”: “An socio-demographic study”. To describe mother's satisfaction with maternal care received during hospitalization for delivery, and to identify socio-demographic and health-care related factors associated with satisfaction. A cross-sectional study of 446 mother-new born pairs from five hospitals in Puttalam district, Srilanka, was carried out by stratified randomization client satisfaction was measured using a 16 item survey instrument with high internal consistency. The proportion of mothers who were fully satisfied varied from 10.8% to 31.4% for interpersonal aspects, and from 10.1% to 28.9% for technical aspects of car. The satisfaction rates were lower with physical environment (6.1 – 10.1) and higher with outcomes of care (41.0-48.0). The factors associated with client satisfaction identified in this study may be helpful in improving quality of care.

1.4 Frequency and percentage distribution of the determinants of various maternal health care factors with respect to healthcare facility centers

In this section the collected data has been classified and presented in frequency and percentage distribution. The statistical analysis of personal profile of mothers of new born babies in different government and private healthcare facility centers in Kalaburagi city based on demographic characteristics and maternity determinants was done.

Location	Rural	29	59.2%	20	40.8%	49	100.0%
	Urban	21	41.2%	30	58.8%	51	100.0%
	Total	50	50.0%	50	50.0%	100	100.0%
Income Monthly household income	more than 15000	0	.0%	32	100.0%	32	100.0%
	1000 to 15000	50	73.5%	18	26.5%	68	100.0%
	Total	50	50.0%	50	50.0%	100	100.0%
Number of children	3	6	40.0%	9	60.0%	15	100.0%
	2	16	41.0%	23	59.0%	39	100.0%
	1	28	60.9%	18	39.1%	46	100.0%
	Total	50	50.0%	50	50.0%	100	100.0%
Education of mother	Degree	11	37.9%	18	62.1%	29	100.0%
	PUC	14	43.8%	18	56.2%	32	100.0%
	Matric	25	64.1%	14	35.9%	39	100.0%
	Total	50	50.0%	50	50.0%	100	100.0%
Reason for not using government service	Doctors are not available	0	.0%	5	100.0%	5	100.0%
	Long waiting hours	0	.0%	12	100.0%	12	100.0%
	Long distance	0	.0%	16	100.0%	16	100.0%
	Service not satisfactory	0	.0%	17	100.0%	17	100.0%
	Total	0	.0%	50	100.0%	50	100.0%
Reason for not using private service	Service not satisfactory	0	.0%	0	.0%	0	.0%
	Long distance	0	.0%	0	.0%	0	.0%
	Doctors are not available	8	100.0%	0	.0%	8	100.0%
	Treatment costly	42	100.0%	0	.0%	42	100.0%
	Total	50	100.0%	0	.0%	50	100.0%
Decision Influenced by for choosing health service	Close to my home	0	.0%	0	.0%	0	.0%
	Previous pregnancy (not for 1st birth)	7	50.0%	7	50.0%	14	100.0%
	Asha or PHC (primary health center)	22	52.4%	20	47.6%	42	100.0%
	Family and friends	21	47.7%	23	52.3%	44	100.0%
	Total	50	50.0%	50	50.0%	100	100.0%
First visit	6 to 9 months	0	.0%	0	.0%	0	.0%
	3 to 6 months	20	58.8%	14	41.2%	34	100.0%
	1 to 3 months	30	45.5%	36	54.5%	66	100.0%
	Total	50	50.0%	50	50.0%	100	100.0%
Time taken to travel	more than 2 hours	8	61.5%	5	38.5%	13	100.0%
	30 mins to 1 hour	13	50.0%	13	50.0%	26	100.0%
	Less than 30 mins	10	35.7%	18	64.3%	28	100.0%
	1 to 2 hours	19	57.6%	14	42.4%	33	100.0%
	Total	50	50.0%	50	50.0%	100	100.0%
Mode of transport	Walking	0	.0%	0	.0%	0	.0%
	Car	5	22.7%	17	77.3%	22	100.0%
	Ambulance	19	50.0%	19	50.0%	38	100.0%
	Public transport (auto, bus etc)	26	65.0%	14	35.0%	40	100.0%
	Total	50	50.0%	50	50.0%	100	100.0%
Average amount of time waited	More than 2 hours	1	33.3%	2	66.7%	3	100.0%
	1 hour to 2 hours	3	42.9%	4	57.1%	7	100.0%
	30 mins to 1 hour	25	78.1%	7	21.9%	32	100.0%
	Less than 30 mins	21	36.2%	37	63.8%	58	100.0%
	Total	50	50.0%	50	50.0%	100	100.0%
Number of visits	1 to 3 visits	17	40.5%	25	59.5%	42	100.0%
	more than 3 visits	33	56.9%	25	43.1%	58	100.0%
	Total	50	50.0%	50	50.0%	100	100.0%
Health services received	Gynecological examination	15	31.9%	32	68.1%	47	100.0%
	Physical examination (including weight, blood pressure, heart rate)	35	66.0%	18	34.0%	53	100.0%
	Total	50	50.0%	50	50.0%	100	100.0%
Followed the information	No	12	70.6%	5	29.4%	17	100.0%
	Yes	38	45.8%	45	54.2%	83	100.0%
	Total	50	50.0%	50	50.0%	100	100.0%
Delivery attended	No	14	100.0%	0	.0%	14	100.0%
	Yes	36	41.9%	50	58.1%	86	100.0%
	Total	50	50.0%	50	50.0%	100	100.0%
Attended by	Others	0	.0%	0	.0%	0	.0%
	Nurse	14	100.0%	0	.0%	14	100.0%
	Doctor	36	41.9%	50	58.1%	86	100.0%
	Total	50	50.0%	50	50.0%	100	100.0%
Satisfaction from birth attendant	Neither satisfied nor dissatisfied	0	.0%	0	.0%	0	.0%
	Dissatisfied	0	.0%	0	.0%	0	.0%
	Partially satisfied	20	55.6%	16	44.4%	36	100.0%
	Completely satisfied	30	46.9%	34	53.1%	64	100.0%
	Total	50	50.0%	50	50.0%	100	100.0%
Nature of your delivery	Normal	18	41.9%	25	58.1%	43	100.0%
	Caesarian	32	56.1%	25	43.9%	57	100.0%
	Total	50	50.0%	50	50.0%	100	100.0%

Problems after your delivery	Yes	16	100.0%	0	.0%	16	100.0%
	No	34	40.5%	50	59.5%	84	100.0%
	Total	50	50.0%	50	50.0%	100	100.0%
Referral to secondary clinic or hospital	Yes	16	100.0%	0	.0%	16	100.0%
	No	34	40.5%	50	59.5%	84	100.0%
	Total	50	50.0%	50	50.0%	100	100.0%
Expenditure on delivery	Less Rs 1000	24	96.0%	1	4.0%	25	100.0%
	Rs 1000 to Rs 5000	26	70.3%	11	29.7%	37	100.0%
	More than Rs 5000	0	.0%	38	100.0%	38	100.0%
	Total	50	50.0%	50	50.0%	100	100.0%
Expenditure payment	Demanded	4	17.4%	19	82.6%	23	100.0%
	Paid by the rules	46	59.7%	31	40.3%	77	100.0%
	Total	50	50.0%	50	50.0%	100	100.0%
Overall satisfaction	Dissatisfied	0	.0%	0	.0%	0	.0%
	Partially satisfied	15	55.6%	12	44.4%	27	100.0%
	Completely satisfied	35	47.9%	38	52.1%	73	100.0%
	Total	50	50.0%	50	50.0%	100	100.0%

Analysis

For the present study we have surveyed 5 government healthcare facility centers and 5 private healthcare facility centers in the Kalaburagi city and collected the data. From each healthcare facility centers we interviewed 10 respondents who were mothers of new born babies through our questionnaire. We have 50 respondents from government healthcare facility centers and 50 from private healthcare facility centers. We collected the data regarding their socio-demographic profiles and various other factors related to them.

We have five socio-demographic factors viz; age, location, monthly household income, number of children to them and education of the mothers of new born babies. We observe from above table that most of the respondents found in the age group 22 to 26 and within this group 45% have chosen government healthcare facility centers and 55 % have chosen private healthcare facility centers. This is nearly equal because respondents with low income prefer government healthcare facility centers and respondents with high income prefer private healthcare facility centers. Kalaburagi city has nearly equal percentage of population with low and high income.

There are 49 respondents from rural location and 51 from the urban . This is nearly equal because nowadays rural people have good facility of ambulance and public transport so they travel to city for the maternity services.

In the monthly household income of the respondents 68 out 100 respondents are below Rs 15000 and 32 are more than Rs 15000. 18 out of 68 respondents have chosen private healthcare facility centers in spite of income less than Rs 15000. This may due their pregnancy complication, so they thought of taking their maternity services in private health facility center since they have specialist doctors.

In the factor number of children of the respondent 23 out of 39 respondents for having their second child they have chosen private healthcare facility centers. This may due to first delivery may be a caesarian and they don't want any risk for the second delivery. So they have chosen private healthcare facility centers where we they have special skilled doctors. In the education profile of the respondents we have almost equal respondents in all the categories of educational qualification factor that is metric, Pre-university education (PUC) and degree. In the factor influence for choosing healthcare facility centers most of the respondents in rural location are influenced by Asha or primary health center (PHC) and most of the respondents in urban location are influenced by their family and friends. 66 out of 100 respondents first visit to healthcare facility centers is in the first 1 to 3 months of pregnancy. This is good thing that nowadays people are serious about their maternal health care.

In the factor time taken to travel to healthcare facility centers factor 8 out of 13 respondents who have chosen government healthcare facility centers and 5 out of 13 respondents who have chosen private had taken more than 2 hours to travel to healthcare facility centers. Which is a matter concern and government should take care of this matter.38 out of 100 respondents had chosen ambulance, 40 out of 100 respondents has chosen public transport and 22 out of 100 had chosen car to reach the healthcare facility centers. Thus almost all mode of transport are utilized except by walk.

58 out of 100 respondents average amount of waiting time to commence the treatment is less than 30 minutes. This is good sign that healthcare facility centers maternity wards are more active than other wards.42 out of 100 have visited 1 to 3 times and 58 out of 100 have visited more than 3 times to the healthcare facility centers in their entire pregnancy period which is nearly equal. For the factor health services received during pregnancy factor 32 out of 47 has gone through gynecological examination in the private healthcare facility centers and 35 out of 53 gone through physical examination.83 out of 100 respondent have followed the information provided by the healthcare facility centers provided them to by the healthcare facility centers during their pregnancy. 17 out of them have not followed this may be the reason that they may not be well educated.

In the factor delivery attended 86 out of 100 deliveries were attended by skilled attendant. This is good sign of maternity services. In the factor delivery attended by 86 out of 100 deliveries are attended by doctors. Within that 50 private healthcare facility centers respondents' deliveries are attended by only doctors. This is because these private healthcare facility centers are owned by individual doctors and they take of the respondents personally.64 out of 100 respondents are completely satisfied by delivery attended by factor and 36 out of 100 were partially satisfied. There is no respondent who is dissatisfied.

In the factor nature of delivery 43 out of 100 respondents' deliveries are normal and 57 out of 100 deliveries are caesarian which is nearly equal. This is the factor which has to be taken care because earlier days caesarian deliveries were less than normal deliveries. In the above table 84 respondents out of 100 have no problems after delivery and 16 out of 100 had problems after delivery. These respondents are been referred to secondary clinics. This may due to malnutrition of baby or mother or any type of infection which needs special care.

From the total respondents that are 38 out of 100 respondents expenditure is more than Rs 5000 and who are from the private healthcare facility centers. 37 out of 100 expenditure is from Rs 1000 to Rs 5000 and in which 11 are from private healthcare facility centers. These respondents' deliveries are normal so they didn't have much expenditure in spite of choosing the private healthcare facility centers. 25 out of 100 expenditure is less than Rs 1000 and within it 24 are from government healthcare facility centers. This is because government takes care of their expenditures through various schemes. From the above table 77 out 100 respondents have done payment of their expenditure as per the rules of the healthcare facility centers where as 23 were demanded other than mentioned in rules. This is because of the bribes, tips etc. In the factor Overall satisfaction 73 out of 100 respondents are completely satisfied. This good sign that maternity healthcare facility centers are providing better services and are serious about the health of mothers of new born babies. 23 out of 100 respondents are partially satisfied. These are the respondents who have faced some problems during the service.

Conclusion

Maternity health care services affect the social, personal and economic condition of the individual ones family. We observe that 34% of mothers from age group less than 21 years are in government healthcare facility respondents from of the total in government healthcare facility and 18% of respondents in private healthcare facility of the total in private healthcare facility. This is indicates that

most of them are from rural background and where in marriages and pregnancy are happening at early stage that is less 21 years old. 60% of respondents from total in private healthcare facility are from urban background and 42% in government health facility. 36% respondents with less than Rs15000 income are in private healthcare facility and all of them in the government healthcare facility are less than Rs15000 income, this is because to get benefitted from government schemes one should have less than Rs15000 income. 12% respondents are getting born there 3rd child in government healthcare facility and 18% respondents are giving birth to their 3rd child in private. This is good sign that now days few people are left who are not aware of family planning. All the respondents are educated in the survey, so this is good fact that education has become mandatory for females. 34% of the respondents who are in private healthcare facility didn't opt for government healthcare services due the reason that their services are not to satisfactory level., 84% of the respondents from government health facility did not go to private health facility due to the reason that the treatment there is costly. All together most of the respondents are satisfied as per their need in both government and private healthcare facility. This is sign of improvement and development in maternal health services of Kalaburagi city.

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