

Satisfaction among caregivers of beneficiaries with the services provided at the well-baby clinic of a tertiary care hospital, Kolkata



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ABSTRACT

Background: Well-baby clinics (WBC) are health facilities for providing primary care, including immunization services to infants and children. Caregivers' satisfaction is a vital indicator of the quality of healthcare services provided. **Aims and Objectives:** This study aims to assess the caregivers' satisfaction with the services provided at the WBC of a tertiary care hospital in Kolkata, West Bengal and to identify the associated sociodemographic factors. **Materials and Methods:** A descriptive-type of observational study with a cross-sectional design, was conducted from June to July 2022, using a predesigned pretested and structured schedule, among 106 caregivers of beneficiaries attending WBC. Satisfaction was assessed using 24 items answered on a 5-point Likert scale, ranging from "highly satisfied" to "highly dissatisfied." Data were tabulated in MS Excel 2021 and analyzed using statistical package for the social sciences v25.0. Bivariate Logistic Regression was performed to examine the association of sociodemographic factors with caregivers' satisfaction. **Results:** High satisfaction with the services was observed among 52.8% participants. Least number of caregivers were satisfied with the vaccination services. Caregivers' gender, mothers' education and beneficiaries' gender were found to be statistically significant with their satisfaction. Furthermore, the female caregivers had lower odds of statistically significant high satisfaction than the males. **Conclusion:** Almost half of the caregivers were less satisfied with the services offered at the WBC, while the least number of caregivers were satisfied with the vaccination services. Extensive research is needed to identify the factors contributing to the satisfaction of caregivers with the services, mainly vaccination.

Key words: Caregivers' satisfaction; Child care; Patient satisfaction; Vaccination; Well-baby clinic

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INTRODUCTION

A well-baby clinic (WBC), also known as Well Child Clinic, is a health-care facility that emphasizes on providing primary health-care services. Mothers come to the clinic with their infants and children to know about the infant's growth and development. As public health clinics, they provide treatment free of cost. They also provide immunization services according to the Universal Immunization Programme. The clinics are ideally meant to keep a track

on immunization rates in the community and to notify the families of the time for the next vaccination of their children. Immunization has been shown to be the most successful and cost-effective public health intervention in the 20th century.¹ Child immunization is considered to be one of the most successful and a cost-effective global health intervention for decreasing global child illness, lifetime disabilities and death.² Infants and children are monitored at regular intervals for growth and development in these clinics. Referrals to other tertiary health-care centers are

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also done if needed. Most importantly, the staffs provide parenting guidance and support for the proper growth and development of the child. The doctors working there are accountable for educating and directing parents about the importance of proper nutrition, feeding practices, personal hygiene and sanitation, routine immunization, checking for the development of any danger signs in their child, etc. Thus, these specialized clinics deal with the health and well-being of infants and children. They cater to the preventive services and diagnostic procedures required for the pediatric population in a community. Often, the family members of the beneficiaries are unaware of the prevailing community services and programs.³ WBCs ensure that the caregivers are informed about the various services introduced by the Government so that proper utilization of healthcare facilities can take place.^{4,5} Pediatric primary care aims to reduce health disparities and promote coordinated health care utilization.⁶ A number of studies highlighted the importance of service quality, service value, etc. with satisfaction. Many studies focus on health-care services provided to children only in hospitals. Furthermore, satisfaction with health services is an important aspect in healthcare. Primary care physicians offer services that aid in caring for children with serious chronic illnesses.⁷ Since physicians aim to deliver healthcare that is both effective and patient-centered, it is important to understand the association between patients and their caregivers' experience and subsequent health outcomes. Hence, the current study was done to assess the satisfaction among caregivers of the beneficiaries regarding the various services provided in the WBC located at Khidirpur Maternity Home (KMH), under IPGME&R and SSKM Hospital, Kolkata, which caters to children from birth till 6 years of age.

Aims and objectives

This study aimed at assessing the satisfaction among the caregivers of beneficiaries with the various services offered at the WBC and to find out any associated sociodemographic characteristics.

MATERIALS AND METHODS

Anonymity and confidentiality of the data were maintained throughout the study. Informed written consent was taken from the study participants. Clearance to conduct the study was obtained from the Institutional Ethics Committee (IEC) of IPGME&R and SSKM Hospital, Kolkata.

It was a descriptive type of observational study, with cross-sectional design and was carried out at the WBC located at KMH, which under IPGME&R and SSKM Hospital, Kolkata, West Bengal. The study was conducted for a

period of 2 months (June-July 2022). The study population included all the caregivers of the beneficiaries who attended the WBC, which included parents or other family members.

Inclusion criteria

The caregivers who had visited the WBC more than once were included.

Exclusion criteria

The caregivers who did not give informed written consent for the study were excluded.

The sample size was calculated using Cochran's formula, which is as follows- $Z_{\alpha}^2 pq/l^2$ [Where Z = standard normal deviate, p = prevalence, q = (1- p), l = absolute precision]. Considering Z as 1.96, p as 50%, and l as 10%, the sample size was calculated as 96. After taking 10% non-response rate, the final sample size obtained was 106. All those caregivers who fulfilled the selection criteria were included in the study by consecutive sampling technique, to achieve the desired sample size of 106.

A predesigned, pretested, and structured schedule was employed to obtain data from the study participants. It contained a mixture of open-ended and close-ended questions, was developed in English, Bengali, and Hindi languages and was validated by respective language experts. The WBC at KMH operates for 2 days in a week, i.e., every Wednesday and Friday; hence data were collected on these 2 days every week during the study period, by consecutive sampling technique, in order to achieve the desired sample size. After obtaining informed written consent from the caregivers who fulfilled the inclusion criteria, a face-to-face interview was conducted using the predesigned, pretested, and structured schedule. The independent variables were the sociodemographic characteristics of the study participants, while the dependent variable was the satisfaction of the study participants regarding the various services offered at the clinic.

Data were tabulated in Microsoft Office Excel 2021 (Microsoft Corp, Redmond, WA, USA) and analysis was done using the statistical package for the social sciences version 25.0. Armonk, NY: IBM Corp. 2017. Descriptive statistics were presented using mean (\pm SD) median (interquartile range [IQR]) and with the help of suitable diagrams. Satisfaction was assessed using 24 items answered on a 5-point Likert Scale, with options ranging from "highly satisfied" to "highly dissatisfied." Thus, the total score range was from 24 to 120. Satisfaction was categorized based on the median score of overall satisfaction (low satisfaction < median < high satisfaction). The "Satisfaction Index" was calculated by the formula: (Total score by all participants in a particular question response/total possible

score) $\times 100$. Inferential statistics, i.e., association of the sociodemographic characteristics of the study participants with their satisfaction was obtained using bivariate logistic regression. A $P < 0.05$ was taken as statistically significant.

RESULTS

The mean overall satisfaction score was 107.8 ± 9.14 . Almost 90.6% of the study participants were between 18 and 30 years of age, 22.6% were male and 77.4% were female. All of them resided in Urban areas (100%), close to the WBC. Nearly 83% of participants followed Islam, while only 17% were Hindus. Around 95% belonged to OBC/SC/ST, while the rest belonged to the General caste (4.7%). Among the participants, 89.6% of fathers and 74.5% of mothers had attended school. Nearly 16% of mothers were homemakers, while among the fathers, 89.6% had some form of employment. Almost 80% belonged to Class IV socioeconomic status (as per Modified B.G. Prasad Scale, updated on February 2022). Among the beneficiaries, majority (75.5%) belonged to the age group 6 months to 24 completed months and almost half (50.9%) were female children (Table 1).

The median (IQR) of overall satisfaction score was 109 (97, 116). The overall satisfaction index was 86.2% (Table 2).

Among the participants, 52.8% had high satisfaction, while 47.2% had low satisfaction with the various services provided at WBC (Figure 1).

Highest satisfaction with services offered at WBC was observed with the referral services (97%), followed by counseling advice given by the nurses (94%), while least satisfaction was found with the vaccination services (55%) (Figure 2).

Bivariate Logistic Regression revealed statistically significant lower odds of high satisfaction among female caregivers as compared to the males (AOR = 0.37, 95% CI 0.14–0.99; $P = 0.049$) and among the mothers who received schooling as compared to those who were illiterates (AOR = 0.37, 95% CI 0.14–0.94; $P = 0.038$). Furthermore, female beneficiaries had lower odds of high satisfaction than male beneficiaries who attended the WBC (AOR = 0.42, 95% CI 0.19–0.93; $P = 0.033$) (Table 3).

DISCUSSION

According to a study conducted by Shati et al. in Saudi Arabia, 37.1% were highly satisfied with the services offered at WBC while 5.2% were dissatisfied. Whereas in the current study, 52.8% had high and 47.2% had low satisfaction with

Table 1: Distribution of socio-demographic characteristics of the study participants (n=106)

Sociodemographic characteristics	Frequency (n [%])
1. Age of the caregiver (in completed years)	
i. 18–30 years	96 (90.6)
ii. 31 years and above	10 (9.4)
2. Gender of the caregiver	
i. Male	24 (22.6)
ii. Female	82 (77.4)
3. Residence	
i. Urban	100 (100)
4. Caste	
i. General	5 (4.7)
ii. Others (OBC/SC/ST)	101 (95.2)
5. Religion	
i. Hinduism	18 (17.0)
ii. Islam	88 (83.0)
6. Education of caregiver	
i. Father	
Illiterate	11 (10.4)
Others	95 (89.6)
ii. Mother	
Illiterate	27 (25.5)
Others	79 (74.5)
7. Occupation of caregiver	
i. Father	
Unemployed	11 (10.4)
Others	95 (89.6)
ii. Mother	
Homemaker	17 (16.0)
Others	(84.0)
8. Socioeconomic Status (Modified B.G. Prasad Scale, updated on Feb 2022)	
i. Class I	2 (1.9)
ii. Class II	5 (4.7)
iii. Class III	14 (13.2)
iv. Class IV	85 (80.2)
9. Age of the beneficiaries (in completed months)	
i. 0–6 months	18 (17.0)
ii. 7 months- 24 months	80 (75.5)
iii. 25 months and above	8 (7.5)
10. Gender of the beneficiaries	
i. Male	52 (49.1)
ii. Female	54 (50.9)

the services provided at the clinic. In the same study, 15.1% responded in affirmation with the referral services, while around 60.9% said that the primary work of the physicians was providing health education. In this study, highest satisfaction was found with referral services (97%).⁴

In a study conducted by Sokhela et al. in South Africa, Side-effects to immunization and its management which were supposed to be discussed with the caregivers at every immunization session, either by providing the information or checking previous knowledge, were least recorded. In our study too, the caregivers of beneficiaries had the least satisfaction with the vaccination/immunization services provided at the WBC.⁵

Table 2: Distribution of the median score and IQR along with satisfaction index of the various services offered at the WBC (n=106)

S. No.	Services provided at the WBC	Median (IQR)	Satisfaction index (%)
1.	Health counselling	32 (28,34)	89.8
2.	Curative services on mild illness	5 (4,5)	92.2
3.	Immunization services	19 (16,20)	90.1
4.	Services provided by the doctor	29 (24,30)	92.2
5.	Services provided by the nurses	16 (16,19)	86.3
6.	Referral services	4 (4,5)	88.4
7.	Instruments used	4 (4,5)	87.7
Overall services		109 (97,115.75)	86.2

WBC: Well-baby clinics, IQR: Interquartile range

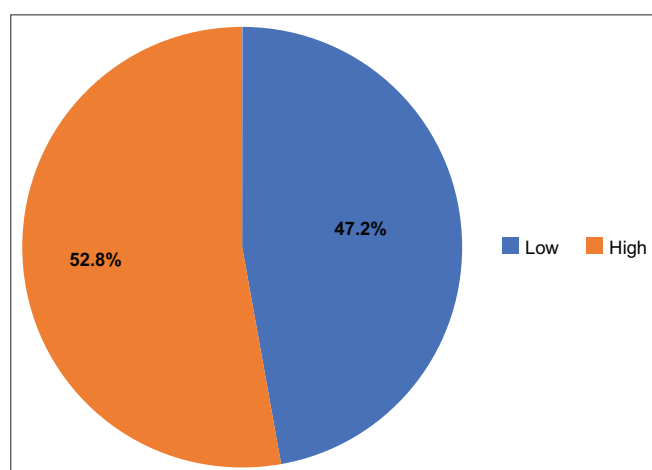


Figure 1: Pie diagram showing the distribution of satisfaction score among the caregivers of beneficiaries who attended the well-baby clinics (n=106)

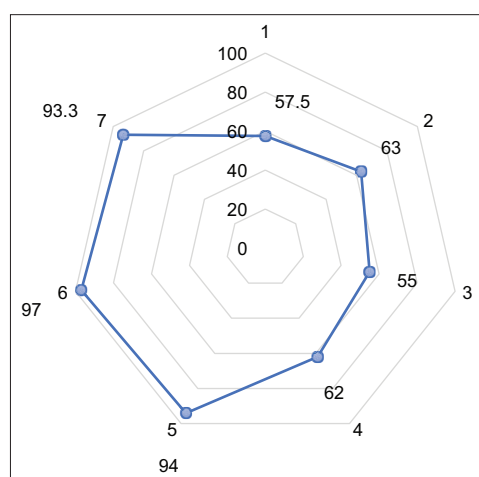


Figure 2: Radar diagram showing satisfaction among caregivers with the various services offered at well-baby clinics (n=106)

The current study demonstrated that the mothers who went to schools had lower odds of high satisfaction with the services provided at WBC as compared to those who were illiterates. Similarly, in a study conducted by Muathe et al. in Nairobi, Kenya, all those caregivers who had college/university level of education were more likely to

adhere to immunization schedule than those with a primary or secondary level of education.⁸

In a study conducted by *Kulkarni SK* in a medical college in Maharashtra, India, regarding general satisfaction with outpatient services, most of the respondents were satisfied with the behavior of consultants, nurses, paramedical staff, other staff, etc. The overall satisfaction level was excellent to good in 73% of respondents and poor in only 5%.⁹ On the contrary, in this study, 52.8% had high satisfaction score with the WBC services and highest satisfaction was found with referral advice and nurses' counseling services.

The present study revealed that around 62% of caregivers were satisfied with the doctors' counseling services, similar to a study conducted by *Kaur et al.* in Punjab, India, where majority of the participants were satisfied with the friendliness/courtesy of the care provider, explanations given for the problem, concern the care provider showed and efforts to include them in decisions about the treatment, medications and follow-up care.¹⁰

According to a study conducted by *Selvarajah et al.* in Malaysia in 2019, caregivers from the Indian community and lower income groups, and those with low educational qualifications were more likely to be satisfied with pediatric clinic services. In the same study, around half of the caregivers were satisfied with the quality of services, compared to the remaining half of the dissatisfied respondents.¹¹ On the other hand, the current study demonstrated around half of the respondents were highly satisfied with the services and mothers who had received schooling had lower odds of high satisfaction as compared to those mothers who were illiterates. Consistent measures must be put in place to increase caregivers' satisfaction, by strengthening the health-care delivery standards. Satisfaction of caregivers should be assessed should be frequent intervals using questionnaires or other relevant methods to identify domains that require substantial improvements. Extensive research should be carried out to identify the factors that can lead to further improvement of the services at the WBC, thereby increasing the caregivers' satisfaction with the same.

Table 3: Bivariate logistic regression table showing associations of the socio-demographic characteristics of the caregivers with the services offered at WBC (n=106)

S. No.	Independent variables (Sociodemographic characteristics)	High satisfaction (n ₁ =56)		
		Number (n [%])	AOR (95% CI)	P-value
1.	Age-group of caregivers (in completed years)			0.425
	18–30	96 (90.6)	Ref.	
	≥31	10 (9.4)	0.63 (0.20, 1.96)	
2.	Gender of caregivers			0.049
	Male	24 (22.6)	Ref.	
	Female	82 (77.4)	0.37 (0.14, 0.99)	
3.	Religion			0.799
	Islam	88 (83.0)	Ref.	
	Hinduism	18 (17.0)	1.14 (0.41, 3.96)	
4.	Education of father			0.452
	Illiterate	11 (10.4)	Ref.	
	Others	95 (89.6)	0.60 (0.16, 2.21)	
5.	Education of mother			0.038
	Illiterate	27 (25.5)	Ref.	
	Others	79 (74.5)	0.37 (0.14, 0.94)	
6.	Occupation of father			0.606
	Unemployed	11 (10.4)	Ref.	
	Others	95 (89.6)	1.39 (0.39, 4.87)	
7.	Occupation of mother			0.590
	Unemployed	17 (16.0)	Ref.	
	Others	89 (84.0)	0.74 (0.26, 2.14)	
8.	Age of beneficiary (in completed months)			0.206
	0–6	18 (17.0)	Ref.	
	6–24	80 (75.5)	0.50 (0.17, 1.46)	
	>24	8 (7.5)	0.50 (0.09, 2.73)	0.423
9.	Gender of beneficiary			0.033
	Male	52 (49.1)	Ref.	
	Female	54 (50.9)	0.42 (0.19, 0.93)	

Model fitness: Cox and Snell R-Square=0.034, Nagelkerke R-Square=0.045, Omnibus test was not significant (P=0.299) and Hosmer–Lemeshow Test was also not significant (P=0.975)

Limitations of the study

If we talk about the limitations of the study, a larger sample size could have been obtained had the clinic operated on a regular basis. Also, since the current study was conducted only in one WBC, the overall satisfaction of caregivers with the various services could not be compared with those provided by other WBCs located at other parts of the state or country.

CONCLUSION

In conclusion, almost half of the study participants were less satisfied with the services offered at WBC, with the least satisfaction found with the vaccination services provided at the clinic. More IEC campaigns should be carried out to generate awareness among people regarding these specialized clinics operating in the community.

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Authors' Contributions:

SP- Literature review, concept and study design, prepared first draft of manuscript, submission for ethical approval, data collection, data analysis and interpretation, manuscript preparation; **SN**- Concept and study design, data analysis and interpretation, critically revising the article for important intellectual content before final submission; **PPP**- Concept and study design, data analysis and interpretation, critically revising the article for important intellectual content before final submission; **MB**- Concept and design of study, statistical analysis and interpretation, critically revising the article for important intellectual content, submission of final article; **AM**- Concept and study design, literature review, revision of schedule, data analysis and interpretation, critically revising the article for important intellectual content before final submission; **SC**- Concept and study design, data analysis and interpretation, critically revising the article for important intellectual content before final submission.

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