

Assess the Knowledge, Utilization and Difficulties While Using the Techo Plus Among Asha Workers.

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Abstract: This descriptive study aimed to assess the knowledge, utilization, and challenges faced by ASHA workers in using the Techo Plus application. The study was conducted in selected areas of Sangli-Miraj-Kupwad Municipal Corporation. The population included ASHA workers from this region, and a purposive sampling technique was used to select 80 participants based on predefined inclusion and exclusion criteria. The reliability of the tool was tested on a sample of 8 ASHA workers at the UPHC in Sangliwadi using the internal consistency method. The calculated reliability coefficient was 0.7637, indicating acceptable reliability of the instrument. Data were collected using a structured questionnaire aligned with the study objectives. The tool comprised four sections: demographic data, 16 items on knowledge, 6 on utilization, and 6 on difficulties related to Techo Plus. Content validity was established through expert review, with feedback received from 18 out of 21 experts from various nursing specialties and a statistician.

Keywords: Knowledge, Utilization, Techo plus.

INTRODUCTION

Techo plus (Technology for Community Health Operations Plus) is a mobile health (mHealth) initiative launched by the Government of Gujarat to strengthen public health service delivery, especially in maternal, neonatal, and child health (MNCH). It was developed to overcome the shortcomings of earlier systems like e-Mamta, which suffered from poor data coverage, duplication, delayed entry, and lack of integration with healthcare services—factors that impeded progress toward Sustainable Development Goals (SDGs) related to health and well-being [1].

The Techo plus system enables real-time data entry by Auxiliary Nurse Midwives (ANMs), both online and offline, ensuring timely and accurate field reporting. A key feature is its use of artificial intelligence to stratify beneficiaries by risk level. High-risk cases automatically trigger alerts to ANMs, Primary Health Center Medical Officers (PHC-MOs), and Taluka-level coordinators, enabling swift intervention. The platform also supports frontline health workers by tracking daily activities, generating automated reports, and displaying educational videos tailored to individual beneficiary assessments [2].

Techo plus is managed through a multi-tiered administrative framework. At the state level, the Health Commissioner chairs the task force overseeing strategic planning. A nodal officer supervises implementation, while district coordinators offer technical support. Taluka Health Officers and district-level officials such as Chief District Health Officers (CDHOs) and Reproductive and Child Health Officers (RCHOs)

provide supervision. PHC-MOs verify family records and conduct field monitoring via a web-based interface, especially after territorial coordinators were phased out in April 2020 [3].

The initiative evolved from the ImTeCHO pilot project, launched in 2013 by a non-profit organization in partnership with the Health and Family Welfare Department. Conducted in rural and tribal regions of Gujarat, the pilot demonstrated significant improvements in ASHA workers' coverage of essential MNCH services. Based on its success, Techo plus was scaled up to offer a comprehensive digital health solution statewide [4].

Overall, Techo plus represents a transformative model for public health governance, combining technology, data-driven decision-making, and structured oversight to improve health outcomes in underserved communities [5].

MATERIALS AND METHOD

Descriptive research approached was used, which included ASHA workers in selected areas of Sangli Miraj and Kupwad corporation. Ethical approval was obtained from the Bharati Vidyapeeth deemed to be University College of Nursing Institutional Ethical Committee (BVDU/CON/SAN/594/2024-2025). Researcher conducted the survey in the community and participants were screened according to the inclusion criteria ASHA worker who are using Techo Plus app, currently active and working in selected area and willing to participate and give written consent. Exclusion criteria were not willing to participate and give written consent.

STUDY PARTICIPANTS

Participants were assigned with Non probability purposive sampling technique.

SETTING

selected areas of Sangli Miraj and Kupwad corporation.

SAMPLE SELECTION CRITERIA

Inclusion Criteria:

1. ASHA workers who are using Techo Plus.
2. ASHA workers who are currently active and working in the selected area.
3. ASHA workers who are willing to participate and give written consent.

Exclusion Criteria: -

1. The ASHA workers who are not willing to Participate and give written consent.

TECHO PLUS APP

Techo plus (Technology for Community Health Operations Plus) is a digital health initiative launched by the Government of Gujarat to enhance maternal and child healthcare services. Designed as a mobile and web-based application, it empowers frontline health workers—such as ASHAs and ANMs—to record and access beneficiary data in real time. The app facilitates early identification of high-risk cases through AI-powered risk stratification, ensuring timely interventions and follow-ups. It also integrates with national health programs like Janani Suraksha Yojana and Poshan Abhiyaan, streamlining service delivery and improving health outcomes. With features like automated reporting, educational video support, and real-time alerts, Techo plus plays a vital role in reducing infant and maternal mortality rates while strengthening the overall public health infrastructure. Participate and give written consent. Exclusion criteria was not willing to participate and give written consent

DATA COLLECTION TOOL

A research technique addresses how data is collected. A research tool is the means by which the data can be collected. The researcher uses this tool to improve the data collection process. The structured questionnaire were based on the study objectives. The tool was divided in four sections. The first section contained demographic data of ASHA workers. The second section contained 16 questions related to the Techo Plus knowledge. the third section contained 6 questionnaires for utilization and fourth section contained 6 questionnaires on difficulties faced while using of Techo Plus.

RELIABILITY

The reliability test conducted in the UPHC in Sangliwadi. The reliability of measuring instrument is a criterion for assessing its quality and adequacy. The test is conducted with Internal consistency method. The reliability test was conducted on 8 samples. In this study the intermediate method is for this study. The ‘r’ value is 0.7637.

RESULT

Most ASHA workers report little difficulty logging into the Techo plus app, suggesting that access and connectivity are generally reliable, with only a small minority occasionally facing network issues. While data entry is not perceived as difficult by any respondents, nearly half (47.5%) express uncertainty about its ease, indicating potential usability challenges or gaps in training that may hinder efficient use. Communication and translation tools are also met with ambivalence—56.25% of users find them neither easy nor difficult—pointing to a lack of clarity or user-friendliness in these features, which could benefit from improved guidance or support. Security and confidentiality are not major concerns for most users, with 71.25% remaining neutral, possibly reflecting limited awareness or engagement with these aspects of the app. Furthermore, many ASHA workers appear unsure about the support available for using Techo plus, which may suggest inconsistent experiences with technical assistance or a general lack of information about help resources. These findings highlight areas where targeted improvements in training, user interface design, and support outreach could enhance the overall effectiveness of the Techo plus platform.

Table No. 1: Frequency and percentage distribution of demographic variables n=80

Demographic variables		Frequency	Percentage
Age (in yrs.)	20 – 30	21	26.25
	31 – 40	39	48.75
	41 – 50	20	25
Education	SSC	37	46.25
	HSC	35	43.75
	Graduate	8	10
Experience (in yrs.)	1 – 5	43	53.75
	6 – 10	23	28.75
	11 – 15	12	15
	16 – 20	2	2.5

Majority of respondents (48.75%) are aged 31–40 years, indicating a relatively mature group. Younger individuals (20–30 years) make up 26.25%, while older participants (41–50 years) account for 25%. The age spread suggests a balanced mix of early-career and mid-career individuals. Most participants have completed SSC (46.25%) or HSC (43.75%), showing a strong representation of secondary education. Only 10% are graduates, suggesting limited higher education among the group. Over half (53.75%) have 1–5 years of experience, indicating a predominantly early-career workforce. 28.75% have 6–10 years, while only 17.5% have more than 10 years of experience. This points to a workforce that is still gaining experience and developing professionally.

Table No. 2: Assessment of knowledge of ASHA workers regarding Techo Plus. n= 80

Level of knowledge	Frequency	Percentage
Poor (0 – 4)	0	0
Average (5 – 8)	0	0
Good (9 – 12)	0	0
Excellent (13 – 16)	80	100

All respondents (100%) fall under the "Excellent" category, scoring between 13–16. No participants were rated as Poor, Average, or Good.

Table No. 3: Assessment of utilization of ASHA workers regarding Techo Plus. n= 80

Level of utilization	Frequency	Percentage
Inadequate (1 – 2)	2	2.5
Moderate adequate (3 – 4)	33	41.25
Adequate (5 – 6)	45	56.25

Adequate utilization is reported by the majority (56.25%), indicating that most respondents are effectively using the resource or system in question.

Moderately adequate utilization is seen in 41.25%, suggesting room for improvement in nearly half the group. Only 2.5% report inadequate utilization, showing minimal underuse.

Table No. 4: Assessment of difficulties faced by ASHA workers while using Techo Plus. n= 80

Sr. No.	Difficulties	Very difficult		Somewhat difficult		Neither difficult nor easy		Somewhat easy		Very easy	
		f	%	f	%	f	%	f	%	f	%
1.	Logging	0	0	0	0	2	2.5	16	20	62	77.5
2.	Connectivity	0	0	0	0	5	6.25	73	91.25	2	2.5
3.	Entering and Editing data.	0	0	0	0	38	47.5	41	51.25	1	1.25
4.	Communication and Translation.	0	0	0	0	45	56.25	33	41.25	2	2.5
5.	Security and Confidentiality.	0	0	0	0	57	71.25	23	28.75	0	0
6.	Support on Techo Plus.	0	0	0	0	43	53.75	36	45	1	1.25

DISCUSSION

The study conducted in the Sangli-Miraj-Kupwad Corporation region provided a comprehensive understanding of ASHA workers' demographic characteristics, their knowledge and utilization of the Techo plus application, and the challenges they encountered. The demographic analysis revealed that the majority of ASHA workers—39 out of 80 (48.75%)—were between the ages of 31 and 40, indicating a relatively mature and experienced workforce. Most of them, 37 (46.25%), had completed education up to the 10th standard, and a significant portion—43 (53.75%)—had between one to five years of experience in the field,

suggesting a blend of foundational education and practical exposure to community health work.

In terms of knowledge about the Techo plus application, the results were overwhelmingly positive. All 80 ASHA workers (100%) demonstrated excellent knowledge, reflecting the success of training initiatives and the intuitive design of the platform. When it came to actual utilization, the findings showed a varied but generally favorable pattern: 45 workers (56.25%) exhibited adequate utilization, 33 (41.25%) showed moderate adequacy, and only 2 (2.5%) had inadequate usage. This distribution suggests that while most ASHA workers are

effectively using the application, a notable segment could benefit from additional support or training to maximize their engagement with the platform.

The study also explored specific difficulties faced by ASHA workers while using Techo plus. Logging in was largely trouble-free, with 62 (77.5%) reporting no issues, indicating that access and authentication mechanisms are functioning well. However, connectivity problems were more prevalent, with 73 (91.25%) acknowledging occasional difficulties, likely due to inconsistent network coverage in certain areas. Data entry posed moderate challenges for 38 (47.5%) workers, which may point to usability issues or gaps in digital literacy. Communication and translation tools were also a source of moderate difficulty for 45 (56.25%) workers, suggesting that these features may not be fully optimized for user-friendliness or multilingual contexts. Concerns around security and confidentiality were met with neutrality by 57 (71.25%) workers, implying either a lack of awareness or limited direct interaction with sensitive data. Additionally, 43 (53.75%) workers reported that the support available for using Techo plus was neither easy nor difficult to access, indicating a need for clearer guidance and more consistent assistance.

Overall, the Techo plus application has significantly enhanced health service delivery by enabling ASHA workers to input real-time data and track beneficiaries, even in cases of migration. It has streamlined operations and improved the accuracy and efficiency of care provided to underserved communities. The study confirms that ASHA workers are well-positioned to leverage this technology, thanks to their strong foundational knowledge and general adaptability. Nonetheless, the findings underscore the importance of ongoing training, improved user support, and enhancements to specific features like data entry and communication tools. By addressing these areas, the TeCHO+ platform can further empower ASHA workers and strengthen the public health infrastructure in the region.

CONCLUSION

The study successfully assessed the knowledge, utilization, and challenges faced by ASHA workers while using the TeCHO+ application in Sangli-Miraj-Kupwad Corporation. Findings indicate that most ASHA workers possess excellent knowledge of TeCHO+, with a majority demonstrating adequate utilization of its features. Although difficulties such as data entry issues, communication barriers, and security concerns were noted, they were largely moderate in severity. The study highlights the effectiveness of TeCHO+ in improving healthcare service delivery by enabling real-time data entry and beneficiary tracking. However, to maximize its potential, ongoing training and technical support are essential. Strengthening these aspects would enhance ASHA workers' ability to leverage TeCHO+ efficiently, ultimately improving healthcare accessibility and quality

within underserved communities. Future research could focus on refining implementation strategies and scaling the program to enhance its impact nationwide.

IMPLICATION

The findings of the study have implication in the health professionals.

NURSING PRACTICE

1. Helps ASHA workers use the Techo Plus application for healthcare in an efficient manner. The purpose of this research is to evaluate their app usage, expertise, and challenges in a certain area.
2. Nursing practice should concentrate on giving ASHA workers actual demonstrations, hands-on training, and ongoing advice in light of the findings. Nurses may help with digital literacy development, data input accuracy.
3. ASHA workers may improve service keep accurate records, and improve the health of community by incorporating Techo Plus into routine healthcare tasks.

NURSING EDUCATION

1. The purpose of this study is to evaluate ASHA worker's knowledge, use, and challenges with the Techo Plus application in a particular region.
2. One crucial digital technology that ASHA workers use to deliver improved healthcare services is Techo Plus. However, a lack of experience, technical difficulties, or internet problems may make it impossible for many ASHA workers to use the app.
3. Nursing education will concentrate on teaching ASHA workers through easy-to-follow and hands-on courses in order to solve these issues during these sessions, participants will receive detailed instructions on how to use the app, practical experience, and fixes for typical issues. To help them utilize the app efficiently, they will also receive regular assistance and refresher training.

NURSING ADMINISTRATION

1. It is essential to guaranteeing that ASHA workers utilize the Techo Plus program efficiently. The purpose of this study is to evaluate the app's use, knowledge, and challenges encountered by ASHA workers in a particular region.
2. Nursing administrators must give ASHA workers the right guidance, support, and training in order to increase productivity. This entails setting up seminars, practical instruction, and ongoing observation to improve their digital proficiency. Finding difficulties like technical difficulties, poor internet access, or a lack of knowledge will be made easier with regular assessment and feedback.
3. The required resources, including mobile devices and internet connection, are accessible, nursing administrators should also work with healthcare authorities. ASHA workers may use Techo Plus

more efficiently for better healthcare service delivery, accurate record-keeping, and better mother and child health outcomes by bolstering administrative support.

NURSING RESEARCH

1. It essential to comprehending the expertise, application use, and challenges encountered by ASHA workers when utilizing the Techo Plus program. The purpose of this descriptive study is to evaluate the difficulties faced by ASHA employees as well as their comprehension and usage of the app.
2. Data gathering and structured questionnaires will be used in the study to learn more about their Techo Plus experience. The results will be useful in identifying technical obstacles, knowledge gaps, and places in need of assistance.
3. On the basis of the findings, suitable training courses and solutions may be created to enhance the app's use. In the end, nursing research in this field will increase healthcare services at the community level by boosting digital healthcare tools and increasing the productivity of ASHA workers.

RECOMMENDATION

1. Several nursing suggestions may be made in light of the study that evaluated the knowledge, use, and challenges that ASHA workers encountered when utilizing the Techo Plus application.
2. To enhance ASHA workers comprehension and application of the software, regular training sessions had to be held. Refresher classes and practical workshops can help them overcome any obstacles and build their confidence.
3. It is imperative for nursing administrators to provide ongoing technical assistance and offer easily navigable manuals in regional languages. Early problem identification and prompt resolution are made possible by appropriate supervision and routine monitoring. Enhancing internet connectivity, technical support, and mobile device accessibility would further improve Techo Plus's usefulness.

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