



Assessment of the Knowledge, Attitudes, and Practices of Auxiliary Nurse Midwives Regarding the Use of Digital Solutions for Antenatal Care Data in Udaipur

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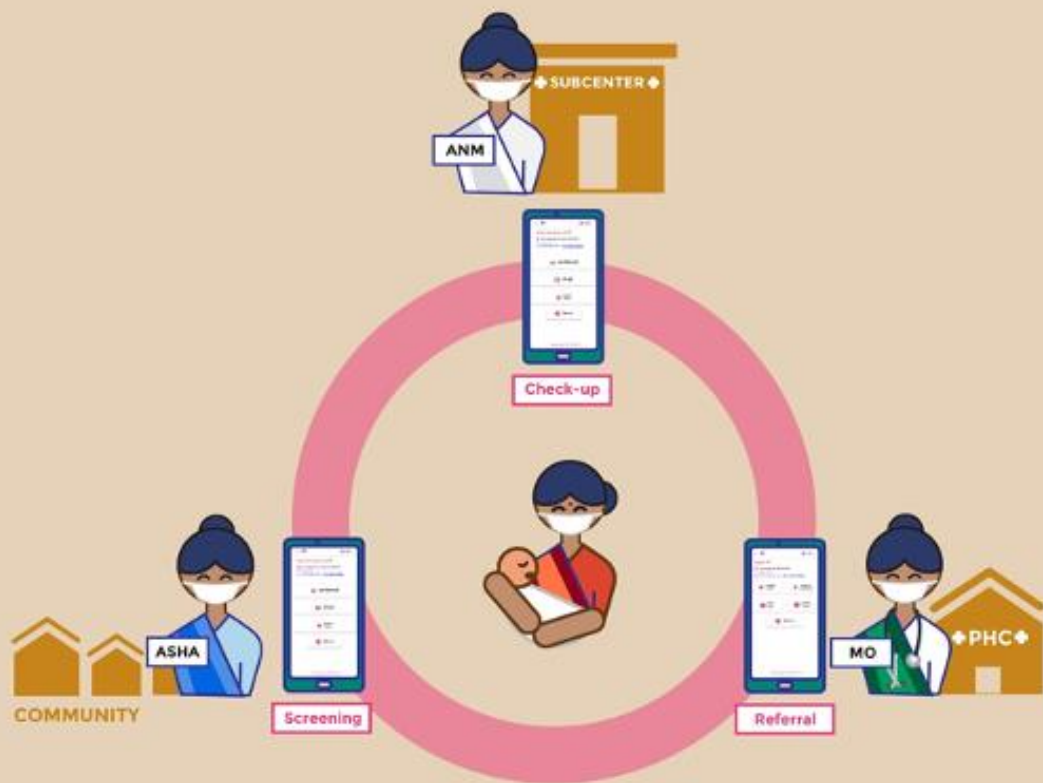
INTRODUCTION

Antenatal care is an important part of mother and child healthcare, as it includes key services for pregnancy monitoring and management.

Regular antenatal visits enable healthcare providers to identify and manage any issues, monitor the health of the mother and fetus, and provide early interventions to ensure a successful pregnancy.

In recent years, there has been a significant interest in incorporating digital solutions into antenatal care services, since these technologies have the potential to improve data management, care coordination, and, ultimately, improved maternal healthcare quality.

The utilization of digital tools, including mobile applications, electronic medical records, has the potential to improve the collection, storage, and use of antenatal care data.



Longitudinal Continuum of care





RATIONALE

- As per WHO, ANMs serve as frontline healthcare providers in urban, rural and underserved areas, where access to quality healthcare is limited. Introducing digital tools to ANMs can significantly enhance the efficiency and accuracy of healthcare delivery by improving data management, facilitating real-time decision-making.
- Studying the implementation and impact of digital tools for Auxiliary Nurse Midwives (ANMs) is pivotal in advancing maternal and child healthcare
- This technological integration not only empowers ANMs with enhanced capabilities for patient care but also strengthens monitoring and evaluation mechanisms, thereby contributing to improved maternal and child health outcomes.
- Utilization of ANM digital tools, helps leveraging technology to bridge healthcare gaps, empower healthcare providers, and ultimately improve the quality and accessibility of maternal and child health services.

Research Question

What is the knowledge, attitude, and practice of ANM about the use of digital solutions for ANC data collection?



AIM & OBJECTIVES

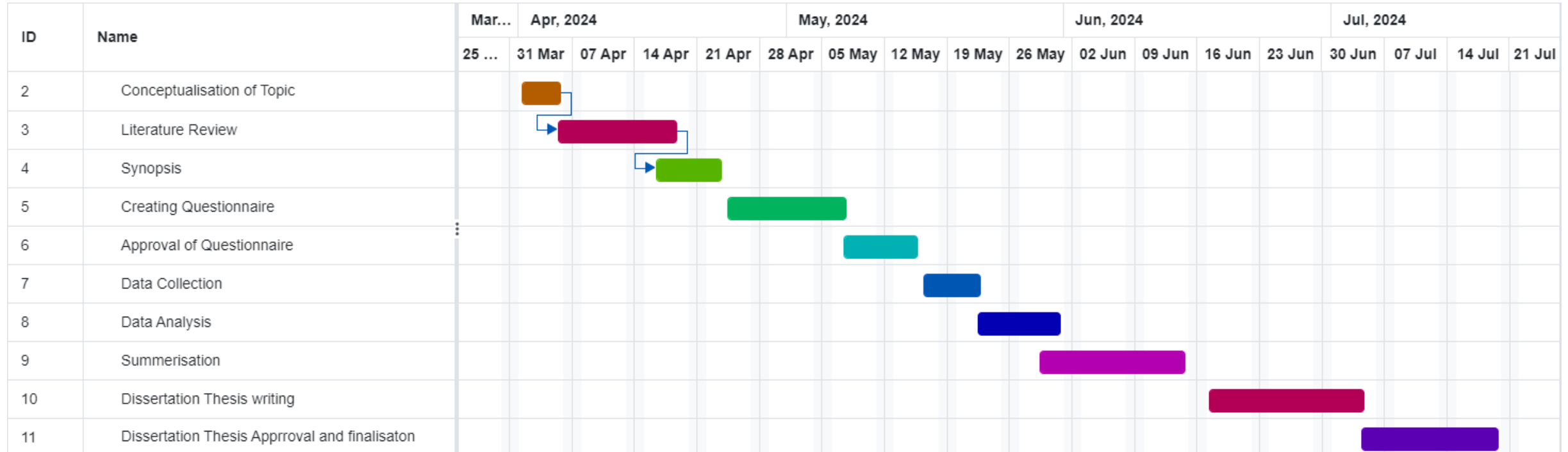
AIM:

- To assess the knowledge, attitudes, and practices of auxiliary nurse midwives in Udaipur about the usage of digital technologies for antenatal care data.

OBJECTIVES:

- To assess the level of knowledge among ANMs on digital solutions for antenatal care data management.
- To explore the attitudes of ANMs towards the adoption of digital solutions in their practices.
- To evaluate the current practices of ANMs in utilizing digital solutions for antenatal care data management.

Gantt Chart



METHODOLOGY

- **STUDY DESIGN**
 - Descriptive cross-sectional study.
- **DATA COLLECTION TOOL**
 - A structured questionnaire through Telephonic Interview.
- **SAMPLE SIZE**
 - 32 ANM
- **DATA ANALYSIS TOOL**
 - MS Excel
- **STUDY SETTING**
 - Udaipur district
- **SAMPLING TECHNIQUE**
 - Purposive sampling

RESULTS

Table 1 : Age of Respondents (N=32)

Sr. No	Age Group	Frequency
1	21-30	7 (22%)
2	31-40	16 (50%)
3	41-50	7 (22%)
4	More than 50	2 (6%)

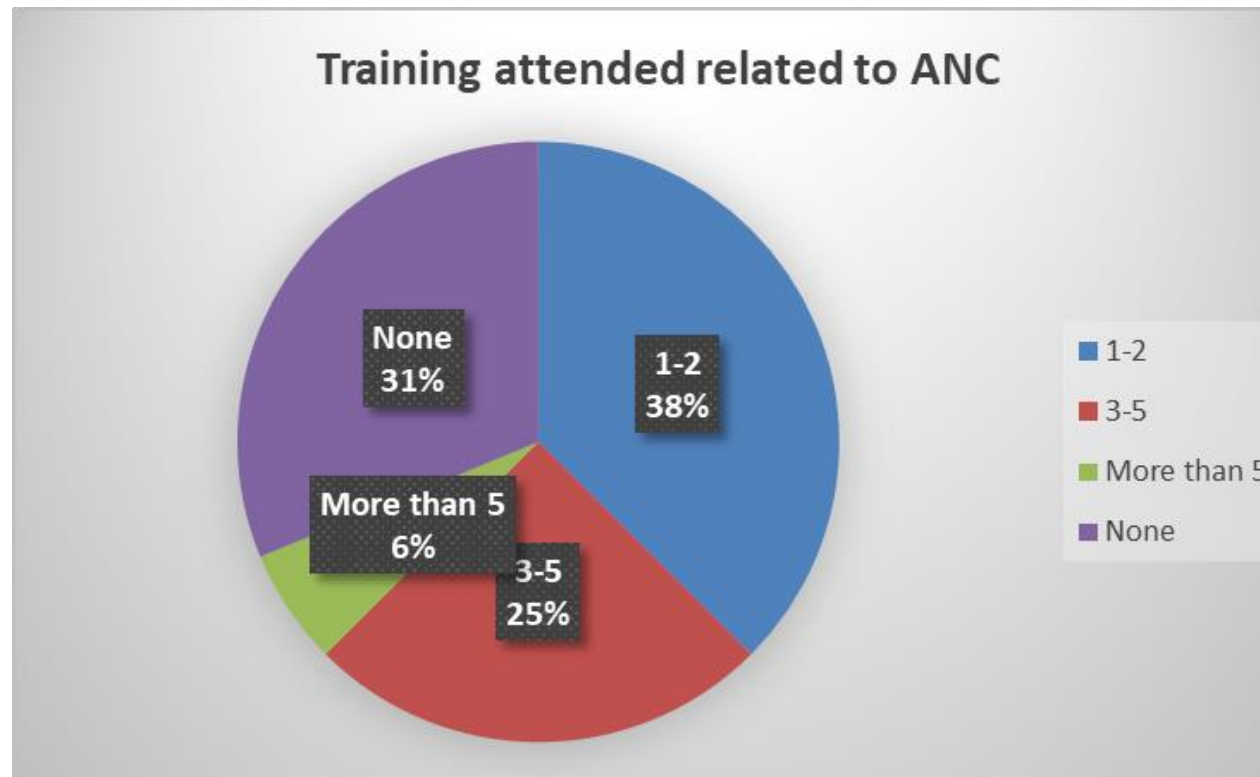
Almost half of the respondents belong to the age group of 31 to 40 years and approx. one-fifth of the respondents belong to the age group of 21 to 30 and 41-50 years. Leaving a very small percentage to respondents more than 50 years of age.

Table 2 : Years of experience in ANC in digital tool (N=32)

Years of experience shows that only 4 percent of the respondents had more than 2 years of experience in managing ANC data in digital tools. While thirty-eight percent of the respondents had 1-2 years of experience in managing ANC data in digital tools and, fifty percent of respondents had less than 1 year of experience.

Sr. No	Year of Experience	Frequency
1	1-2 year	12 (38%)
2	6 months-Less than 1 year	11 (34%)
3	Less than 6 months	5 (16%)
4	More than 2 years	4 (13%)

Figure 1: (N=32) Training attended related to ANC

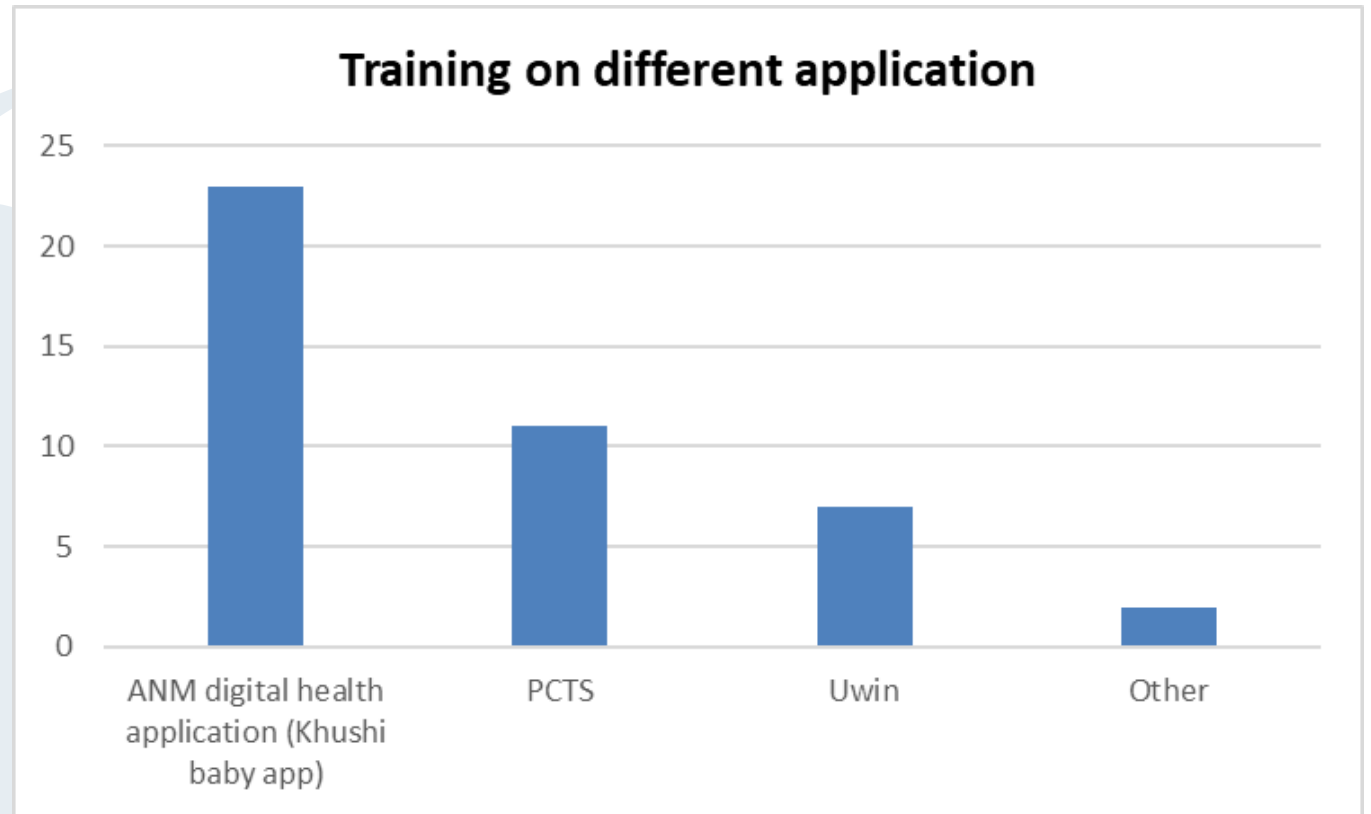


Thirty-eight percent had received 1-2 training sessions. Twenty-five percent of the respondents had attended more than 3-5 sessions of ANC training and only 6 percent of the respondents had attended more than 5 sessions of ANC training. However, thirty one percent of the respondents had not received any training sessions.

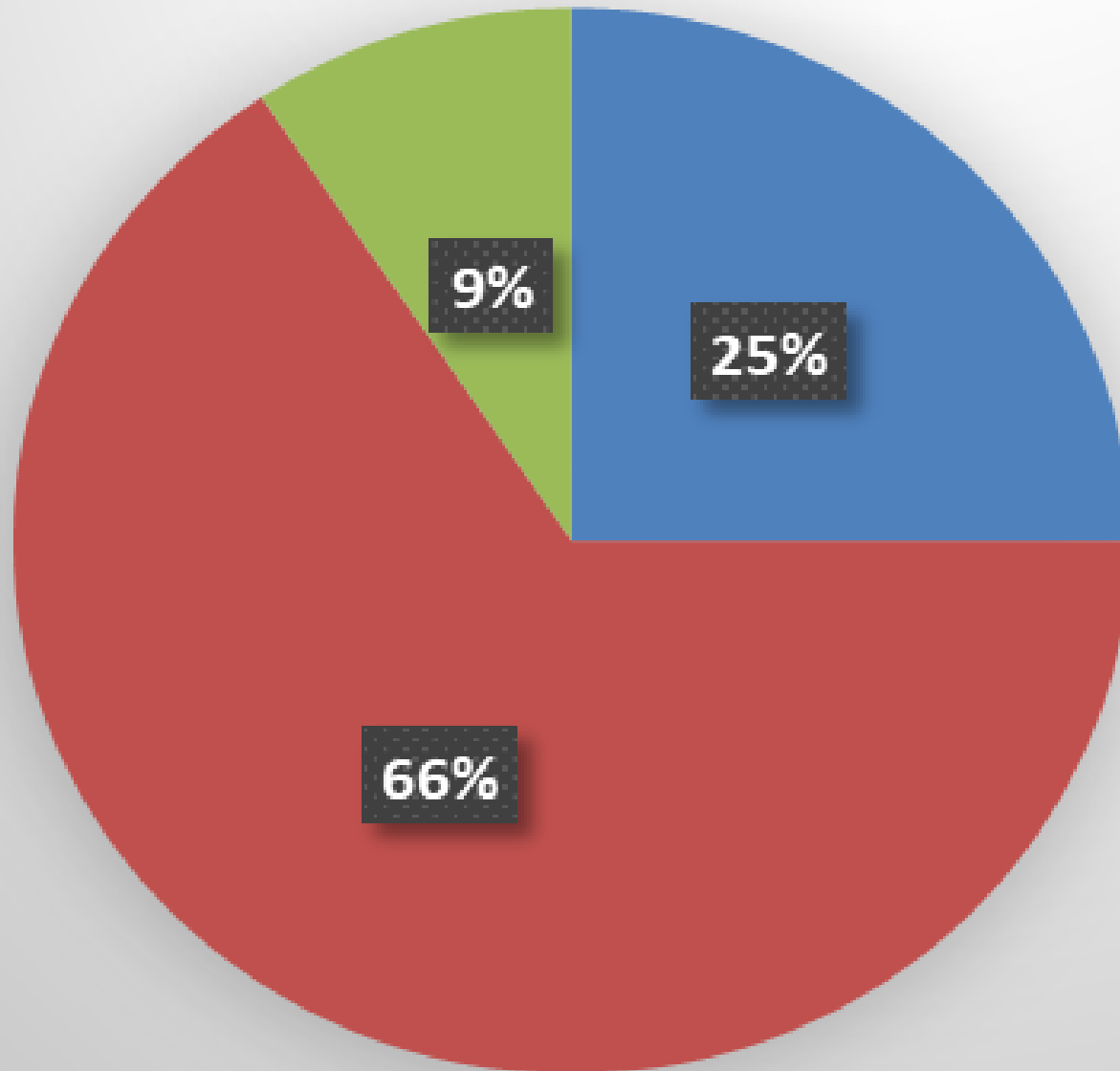
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Figure 2: (N=32) Training on different application

Majority of respondents has been trained on ANM digital health (Khushi baby) application. Then following PCTS and Uwin. However, a significant number are trained on other applications such as Sick cell anemia, AB-HWC, NCD and FP-LMIS etc.



Confident in using digital tool



**Figure 3: (N=32)
Confident in using
digital tool**

Only 9 percent of the respondents are very confident. However, most of the respondents, i.e. sixty six percent, were slightly confident in using the digital tool. One fourth of the respondents falls into the category of not at all confident.

Table 3: (N=32) Update ANC records in digital tool

Sr. No	Update ANC records in digital tool	n(%)
1	Biweekly	3 (9.38)
2	Daily	2 (9.62)
3	Monthly	5 (15.63)
4	Weekly	22 (68.75)

More than half sixty eight percent of the ANM update their ANC records weekly, however fifteen percent of the ANM update their ANC records Monthly and almost similar number of the ANM update their ANC records in biweekly and daily manner .

	Responses, n(%)	
Characteristics	Yes	No
Reliable	28 (88)	4 (13)
Accurate & accessible data	20 (63)	12 (37)
Capture necessary data	19 (59)	13 (41)
ANC data sharing difficulties	10 (31)	22 (69)

Table 4 (N=32) Characteristics of digital tools for ANC

Almost eighty-eight percent of the respondents think that digital tools were very reliable and only thirteen percent of the respondents think digital tools were not very reliable.

Sixty-three percent of the respondents think digital tools had improved the accuracy and accessibility of ANC data and thirty seven percent of the respondents think digital tools had not improved the accuracy and accessibility of ANC data.

Fifty nine percent of the respondents mentioned that digital tools make sure that all necessary ANC data is captured, however forty-one percent of the respondents mentioned that all necessary ANC data captured doesn't captured in digital tools.

Thirty-one percent of the respondents think that there are some difficulties in sharing ANC data and sixty nine percent of the respondents think digital tools didn't have any difficulty in sharing the ANC data.

Table 5 Years of experience Vs Confident in using digital tools for ANC data management

Years of experience Vs Confident in using digital tools for ANC data management (n)			
Year of Experience	Not at all confident	Slightly confident	Very confident
Less than 6 month	2	3	0
6 months to1 year	1	9	1
1-2 year	4	7	1
More than 2 year	1	2	1

Table 5 Years of experience Vs Confident in using digital tools for ANC data management (N=32)

ANMs with less than six months of experience exhibit varying degrees of confidence; some express a slight sense of assurance, while others feel less certain of their skills. Although there is some fluctuation, there is a tendency towards greater confidence levels as experience grows to less than a year and 1-2 years.

Interestingly, even ANMs with over two years of experience exhibit a wide range of confidence levels, with a small but significant minority expressing extreme confidence or no confidence at all.

Table 6 No. of training sessions attended Vs Confident in using digital tools for ANC data management (n)

Number of training session attended	Not at all confident	Slightly confident	Very confident
1-2 session	4	7	1
3-5 session	1	6	1
More than 5 session	0	2	0
No training attended	3	6	1

Table 6 No. of training sessions attended Vs Confident in using digital tools for ANC data management (n)

The bivariate analysis between the number of training attended and the confidence in using digital tools for ANC data management shows that those who attended 1-2 training sessions are primarily relatively confident (7 respondents), followed by those who are not at all confident (4 respondents) and extremely confident (1 responder). Those who attended three to five sessions, on the other hand, tend to feel slightly more confident (6 respondents), while fewer people (1 respondent) and (1 respondent) feel very confident or not at all confident. Significantly, respondents who attended more than five sessions showed higher confidence levels; only two felt very confident, and none at all. A total of two respondents expressed mild confidence. On the other hand, 6 out of the participants who did not attend any training sessions reported feeling very unconfident, followed by 3 respondents who felt somewhat confident and 1 responder who felt extremely confident.

CONCLUSION

- The integration of digital technologies into prenatal care (ANC) services represents a noteworthy advancement in the administration of maternal healthcare, particularly in Rajasthan.
- ANMs' knowledge, attitudes, and practices about these technologies related to ANC data digitally vary in certain context .
- The findings indicate that ANMs have varying perspectives on adopting digital means to collect ANC data. Questions remain regarding the reliability of these technologies and challenges with data sharing, despite the potential benefits being widely accepted in terms of improved data accessibility, accuracy, and real-time monitoring.
- ANMs, whose ages range from 31 to 40 and who possess varying levels of expertise, exhibit cautious optimism over the use of digital

Recommendations

- Proper capacity building of the ANM related to digital tools to only enhance the ANM confident for using the application and making sure to enhance the reliability and quality of the data
- Providing easy to use User friendly interface for ANM to use the digital applications.
- Collaboration between various sectors, including health, education, and social sectors, is essential to create a supportive environment for health workers like ANM to understand and utilize the digital tool.
- Advocating with policy makers to integrate the different digital tools to reduce the burden of using multiple application.



THANK YOU

