Dissertation Defense

IIHMR UNIVERSITY

"Study of challenges faced by ASHA workers in using digital health products/solutions"

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Introduction

The health industry is seeing a shift towards Digital health. With new technologies like mhealth applications, IoT devices and Telemedicine, the utilization of healthcare services has been efficient and effective.

The Indian public healthcare system is based on a three tier structure based on population with ASHA workers, being the first point of contact to the beneficiary of the community. With the advent of digitalisation of healthcare, these ASHA workers also have to undertake the utilisation of the digital health products provided to them to render services to the community.

This transition from offline to online work represents both an opportunity and a challenge. On one hand, digital tools have the potential to enhance the efficiency and effectiveness of ASHA workers, streamline data collection and management, provide real time data access and sharing. On the other hand, ASHA workers belong to rural background and may have limited education, which might affect the smooth adoption of digital products.

Introduction

Research Question

“What are the challenges faced by ASHA workers in the deployment and use of Digital Health Solutions?”

This question underlines the core problem that this research seeks to address. By focusing on ASHA workers, who operate at the point of connection between the healthcare system and the society, this study aims to uncover the practical, day-to-day challenges that impact the effectiveness of digital health initiatives at the most fundamental level of healthcare delivery.

Objectives

- To study the existing digital health solutions used by Asha workers

- To study the principal implementation challenges as encountered by ASHA workers in the deployment of digital health solutions and study the factors contributing to these challenges.

Methodology

The study is a Cross sectional study with the setting being in Pali district of Rajasthan. Pali district was chosen through convenient method of sampling.

A sample size of 50 ASHA workers(120 -130 calls) were contacted telephonically to collect information using a structured questionnaire. The ASHA workers were chosen using convenient sampling.

Information collected from the respondents was analysed using elementary statistical tools and techniques like percentages and raw distribution.

Literature Review

Title and Authors	Key Features
Implementing National Digital Health Blueprint in India-The future opportunities and challenges Sudip Bhattacharya, Sheikh Mohd Saleem, and Md Mahbub Hossain (2022)	The National Digital Health Blueprint (NDHB) aims to improve healthcare in India using digital technology. However, rural areas face challenges like poor availability, limited access, and low digital literacy. To address these issues, the NDHB suggests providing consistent internet access, affordable mobile devices, user-friendly apps, and training skilled personnel. Ensuring equity in digital health policies is essential to prevent worsening social health inequalities and to ensure everyone benefits from these advancements.
Overview of e-Health initiatives in Rajasthan: An exploratory study Nitin Kumar Joshi, Pankaj Bhardwaj, Praveen Suthar, Yogesh Kuman Jain, Vibha Joshi, Kuldeep Singh (2021)	The study includes 13 initiatives categorized into four main groups based on their target primary users client-oriented, healthcare providers-oriented, health system managers-oriented, and data services-oriented interventions.. Insufficient technically skilled professionals at the district level, inadequate manpower, overcrowded health facilities, technical issues and server problems (especially in PCTS and ECTS), low wages leading to demotivation and incomplete data entry by data entry operators, and network and connectivity challenges in rural areas impacting telemedicine services.

Literature Review

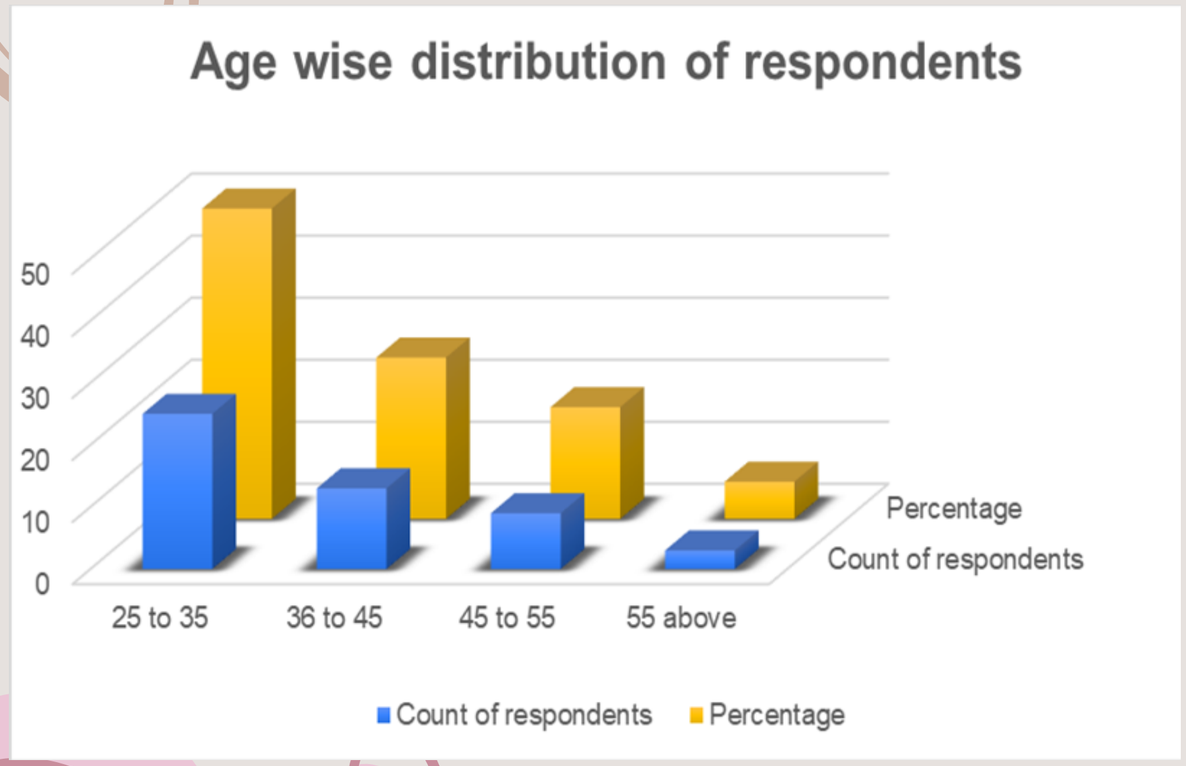
Title and Authors	Key Features
Digital Health Ecosystem in India: Present Status, Challenges, and Way Forward Kapoor, Suraj (2022)	The author highlights the importance of digital health initiatives such as electronic health records, telemedicine, and disease surveillance systems. The paper also identifies challenges to implementing digital health in India, including lack of internet access, data privacy concerns, and low health literacy. Finally, the paper suggests ways to improve digital health in India, such as by collecting better quality data and improving capacity building.
ASHA Kirana: when digital technology empowered front-line health workers. Srinidhi, Baneen Karachiwala, Aditi Iyer, Bhavya Reddy, Vinalini Mathrani, Neha Madhiwalla, Vani Periodi, Anuradha Sreevathsa, Lakshmi Viswanatha, Gita Sen 2021	Supported ASHAs with training, hands-on assistance, and regular debrief meetings, including monthly sessions for feedback and retraining. ASHAs learned to collect individual-level data, shifting from perfunctory to substantive interactions during home visits. Questions based on symptom clusters to identify maternal risks, allowing ASHAs to address issues before escalation.ASHAs felt empowered by understanding and interpreting data, improving their ability to identify and act on maternal risks, and enhancing their status within the community.

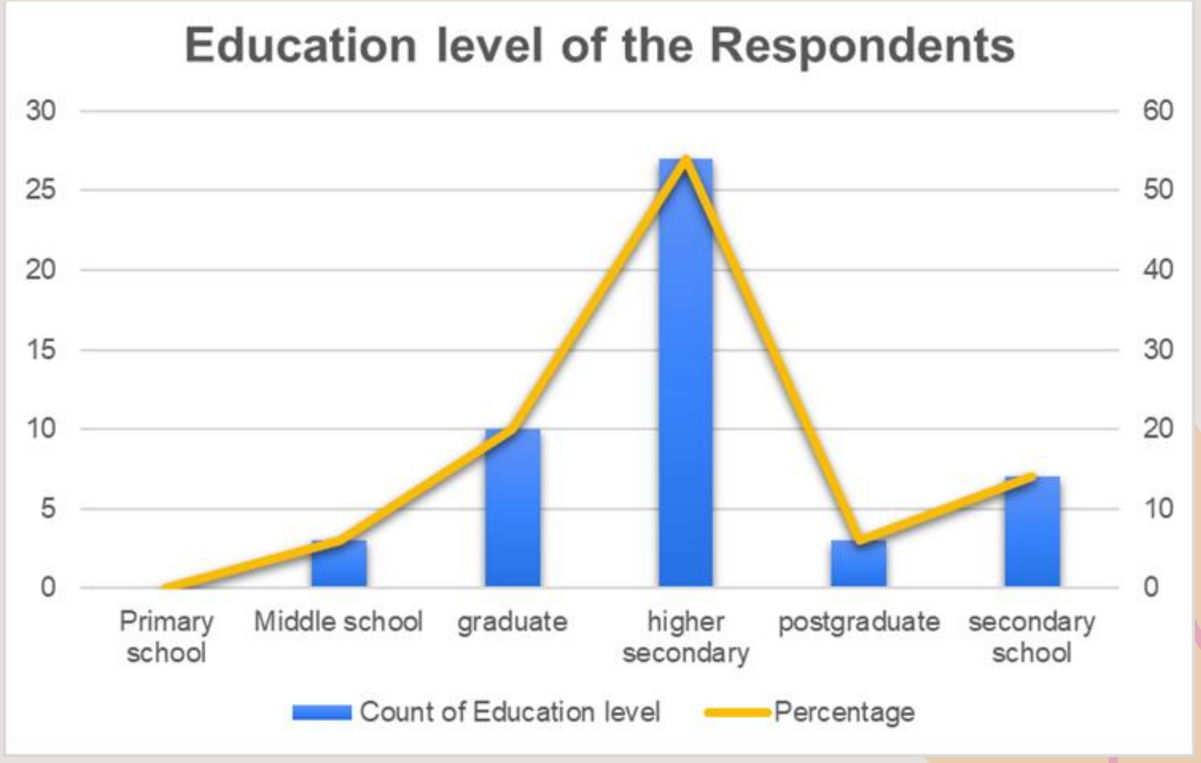
Result and Findings

The primary applications used by ASHA workers in Pali District include:

1. PCTS (Pregnancy, Child Tracking & Health Services Management System)
2. ASHA Digital App
3. NCD (Non-Communicable Diseases) App
4. FPLMS (Family Planning Logistics Management System)
5. Ayushman Bharat App

Result and Findings

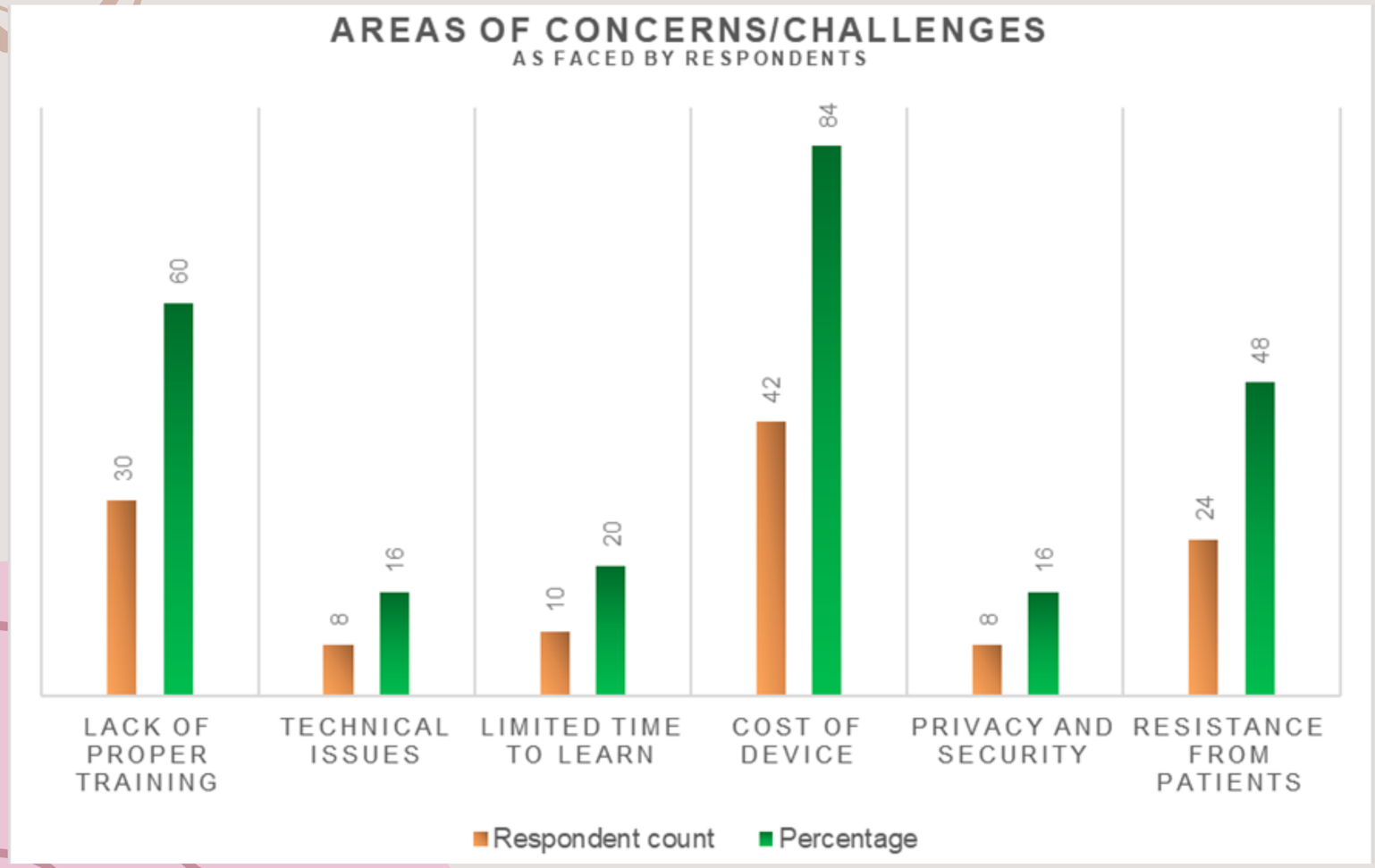




Majority of the respondents had rural region as area of work and belonged to the age bracket of 25-40 yrs (87.5%)

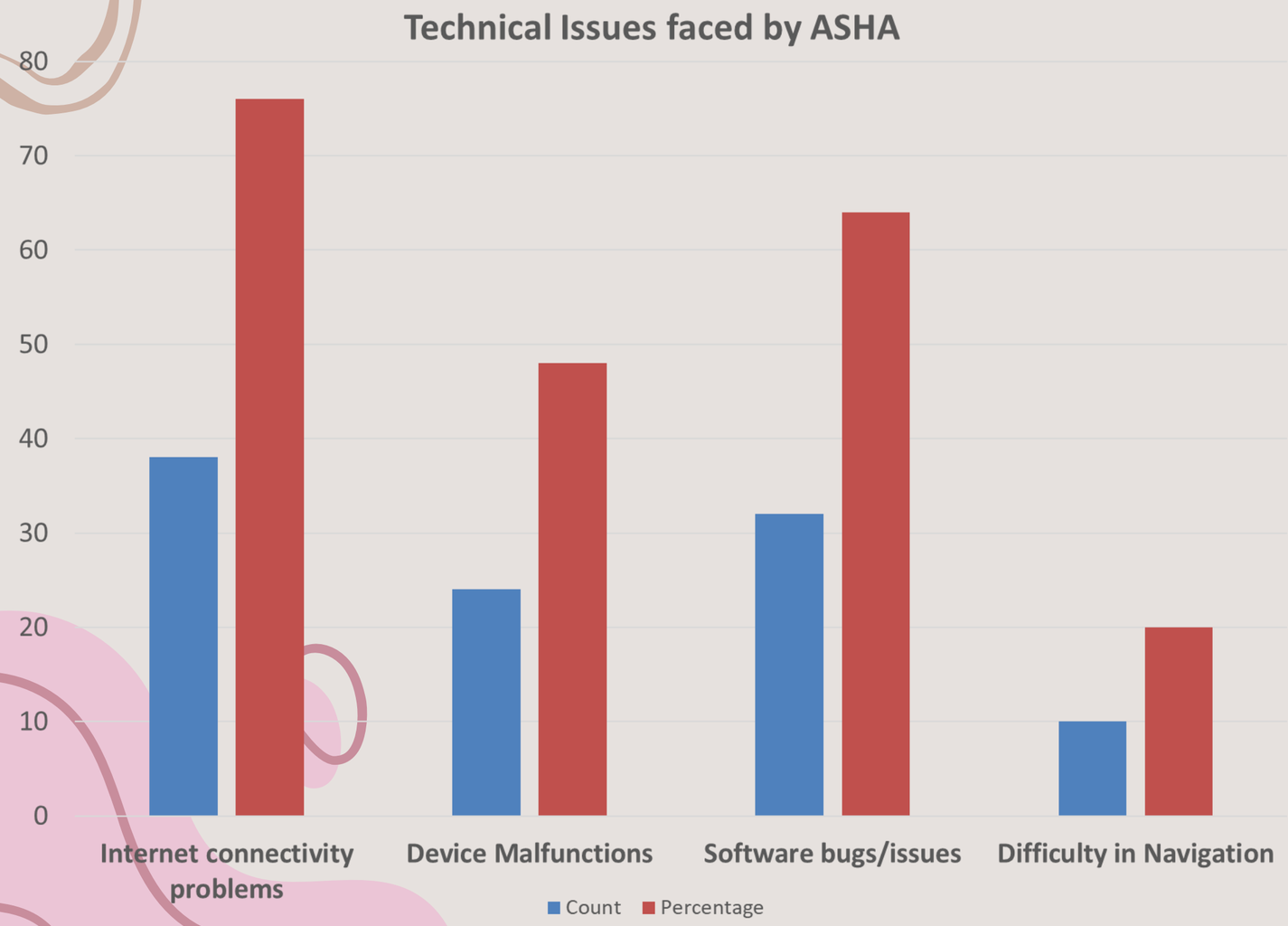
The education level of half of the respondents was higher/senior secondary(52%) followed by 20% Graduate, 14% secondary school, and 7% each for post graduate and middle school.

Result and Findings



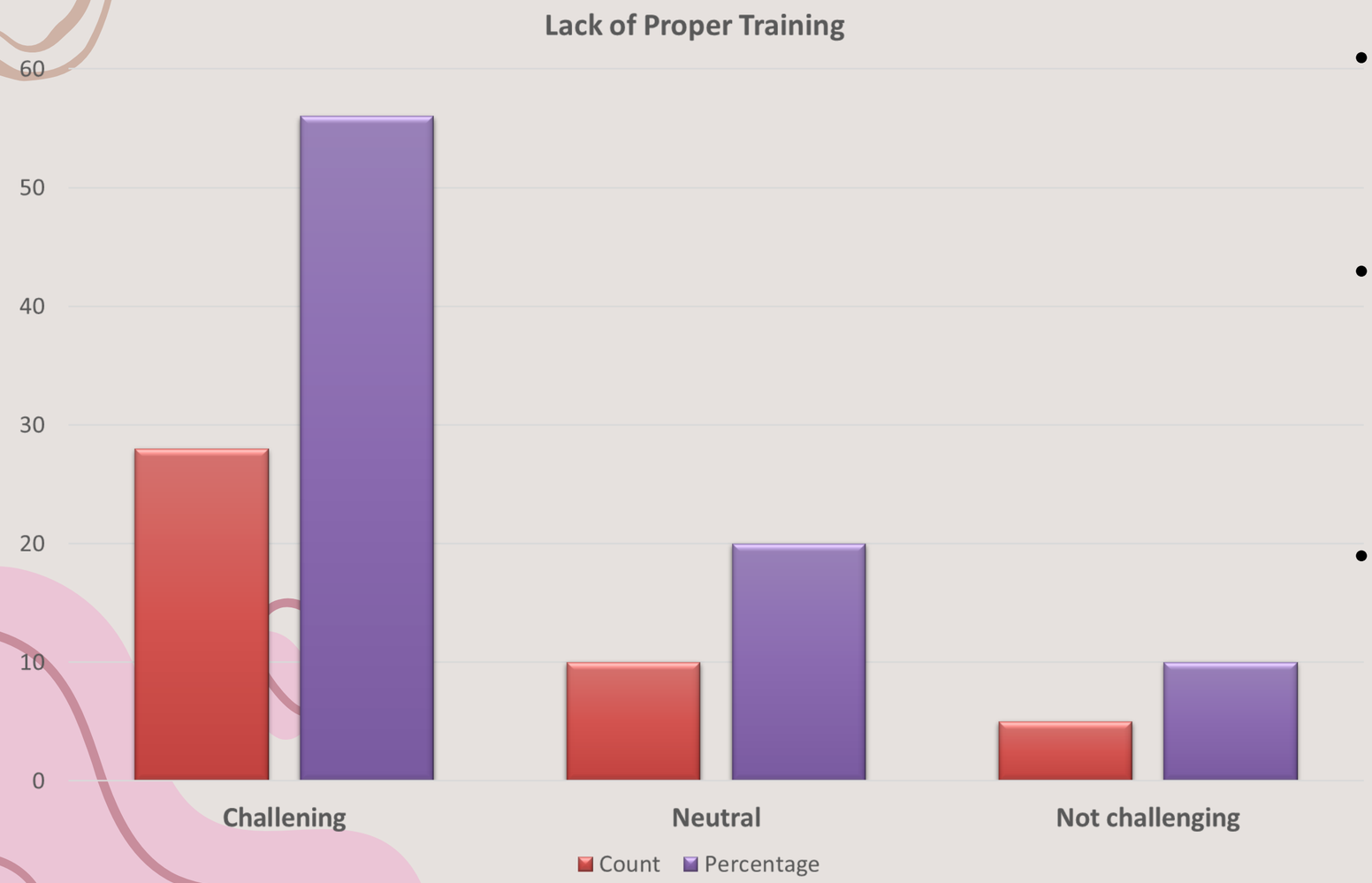
- The main challenges faced by majority of the respondent was the procurement of a smartphone to use the digital health applications
- The Lack of proper training is also seen as challenge by more than half of the respondents
- Technical issues like internet connectivity, software bugs etc. , Resistance from patients and limited time to learn the device in not seen a challenge by many of the workers

Result and Findings



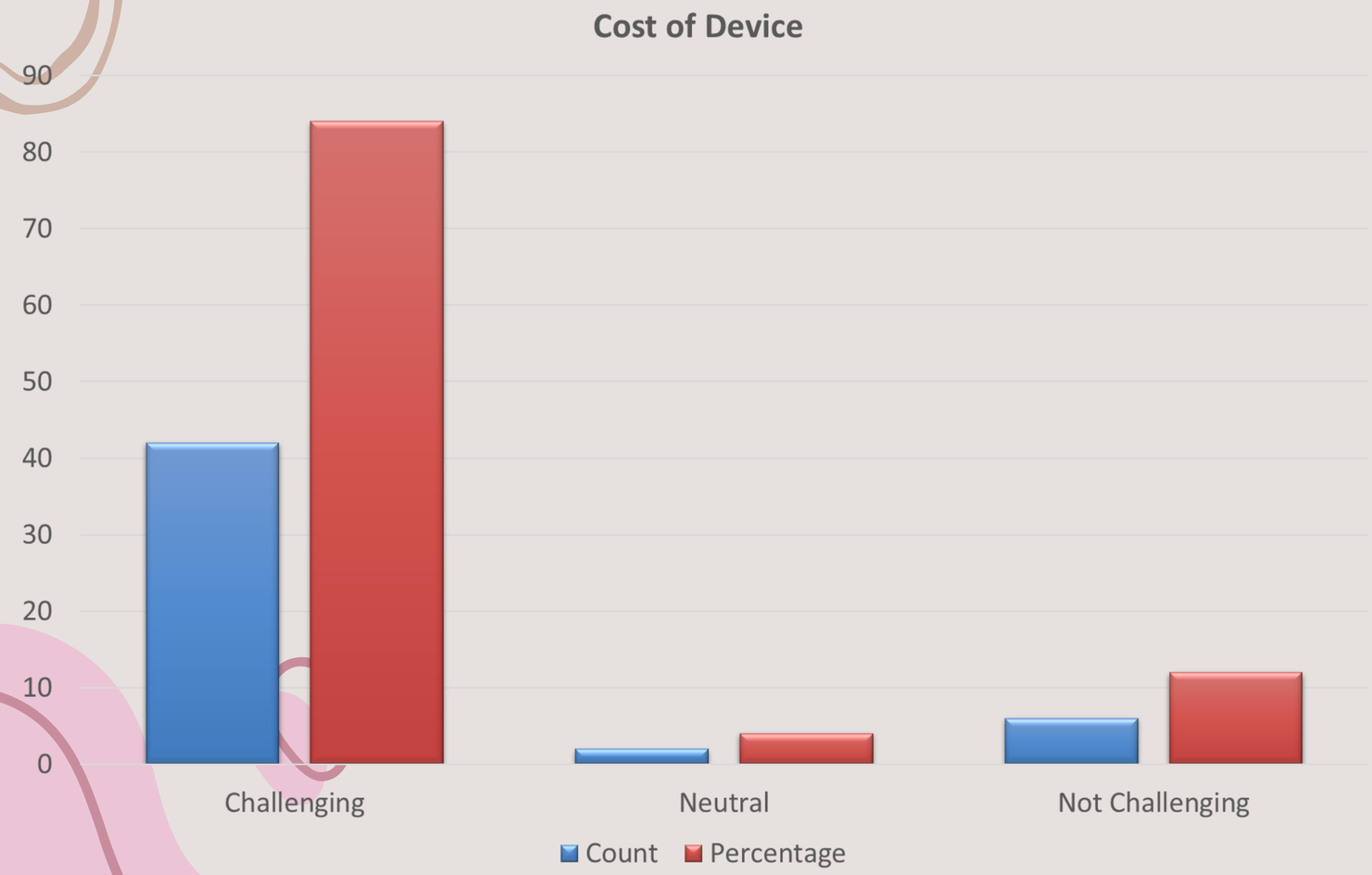
- Technical issues create a major challenge for the ASHA workers, it not only affects the smooth workflow but also leads to duplication of work.
- Many ASHA workers have to face the challenge of software bugs as the application do not respond due to high traffic at particular times, app closing on its own and not logging in are common issues.
- Some workers also face the issue of device not being compatible enough and only 20% percent of the respondents face some difficulty in navigating through the applications.

Result and Findings



- The Lack of proper training is also seen as challenge by more than half of the respondents 57%
- 20% of the respondents feel neutral about the trainings. They feel that can learn with trial and error and taking help of colleagues.
- Very few respondents 10% feel that training given are enough for the workers to adopt these applications.

Result and Findings



Almost 85% of the respondents were burdened by the cost of device which they have to use for the applications. On further discussions with the respondents, it was found that majority of the workers have purchased a smartphone only to use these applications mandated by the government.

Result and Findings

All the respondents had a smartphone. Most of them had the smartphone of their own (95%) while a few respondents had access to a smartphone which belonged to a family member.

More than half of the respondents feel that these applications have improved their efficiency and helped them in their work (65%). Some respondents are neutral towards the shift from offline to online work while still 10% of the respondents were not happy with the shift and feel that their efficiency is reduced with the use of such tools.

The ease of using a mobile phone for majority of the respondents was high. They stated that initially they faced challenges but with time and continuous usage they can now easily operate smartphones.

Result and Findings

The use of the digital application is easy for majority of the respondents (72.5%) while some accepted to facing some difficulties in the use of application in their work.

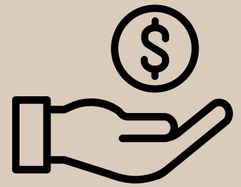
All the respondents overcame any challenges faced by seeking help of colleagues and supervisors and through trial and error on their own level. Majority (97%) of the respondents also contacted the technical support if the difficulty was still not resolved.

The workers were also asked about any suggestions and many of them talked about additional features for an online incentivization provision, and support/assistance for buying a mobile phone. The workers have access to on going technical support and videos of the updates are circulated among the works for their help by the authorities to help in ASHA workers in the proper utilization of the application.

Suggestions

Based on the findings and conclusion, the suggestions for addressing the challenges faced by ASHA workers in using the digital applications are as follows:

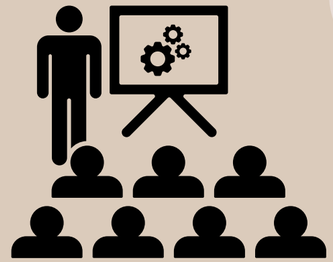
- Financial support to the workers in terms of subsidy or through any other means be provided against the purchase of their smartphones. Such a step would not only relieve them of financial burden and increase the affordability but also would encourage them to have latest technology for efficient use of digital applications.



- It has been found in the study that unavailability of network in the area of operation which are mainly rural areas, and technical glitches encountered while using the applications consume lot of time and energy of ASHA workers. It is therefore imperative to take steps to ensure round the clock availability of network. Applications used by the workers can also provide offline entry which would be automatically uploaded when network is available.

Suggestions

- Providing regular training/ refresher on the use of such digital applications especially when there is an update or change in the architecture of the application would prove to be immensely helpful in making the ASHA workers comfortable and confident about the features of these applications and would ensure full utilisation of the potential of the application.



- The study finds that along with input of data online on the applications, the ASHA workers are also required to maintain the same information offline, in physical form. This is a duplication of work and can be easily avoided. It is recommended that the offline recording of the information and maintenance of the ASHA diary maybe be done away with.

THANK YOU