

## EFFECTS OF DIGITALIZATION OF COOPERATIVE HOSPITAL ON CLINICAL OUTCOMES AND PATIENT SATISFACTION

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### Abstract

To find the effects of digitalization cooperative hospital on clinical outcomes and patient satisfaction. Subjective the study was done to evaluate the effects of digitalization in cooperative hospital on clinical outcomes and patient satisfaction objectives To evaluate the identification of digital transformation in healthcare professionals and cooperative hospital. To evaluate the challenges in digital transformation in health care. To evaluate the data management with electronic health records and manual records, internal communication. To evaluate client satisfaction and clinical outcomes. To evaluate the healthcare mobile apps for both patients and medical staff. Methodology Review studies met the inclusion criteria, cooperative hospital, Thankamani, Kerala within the review studies that were examined. Review studies explored the digitalization of cooperative hospital, identification of domains for clinical outcomes, and patient satisfaction with and without digital transformation technology. Assessment methods and findings were extracted from the selected studies. Information regarding the assessment tools used to determine the configuration approach was extracted. Also extracted were the results of the activity configuration approach assessments used by the Studies. The study designs included a review of qualitative studies and a review of randomized control trials. Best practices for digital transformation technology in cooperative hospital include facilitating clinical outcomes goal setting with clients and communicating efficiently with patients.

**Key Words:** Cooperative Hospital, Digitalization transformation technology, Manual health records, patient satisfaction.

### Introduction

Kerala was one of the exceptionally few states in India where co-operative hospitals and cooperative medical colleges were time-honoured in huge numbers with state aid. Co-operatives are well thought-out to be the best organization intervention to overcome economic barriers in right to use to health care. Co-operative Hospital Thankamani is an instantaneous branch of Highrange Super Specialty co-operative Hospital Society and it has been well-known on 28-05-2010 and inaugurated by praiseworthy Kerala State Co-operative minister G. Sudhakaran, occurrence of Sri. C.V Varghese founder of Hospital Society, Sri.K.K Jaya Chandran M.L.A, Sri. Ashok Kumar Singh I.A.S District Collector.

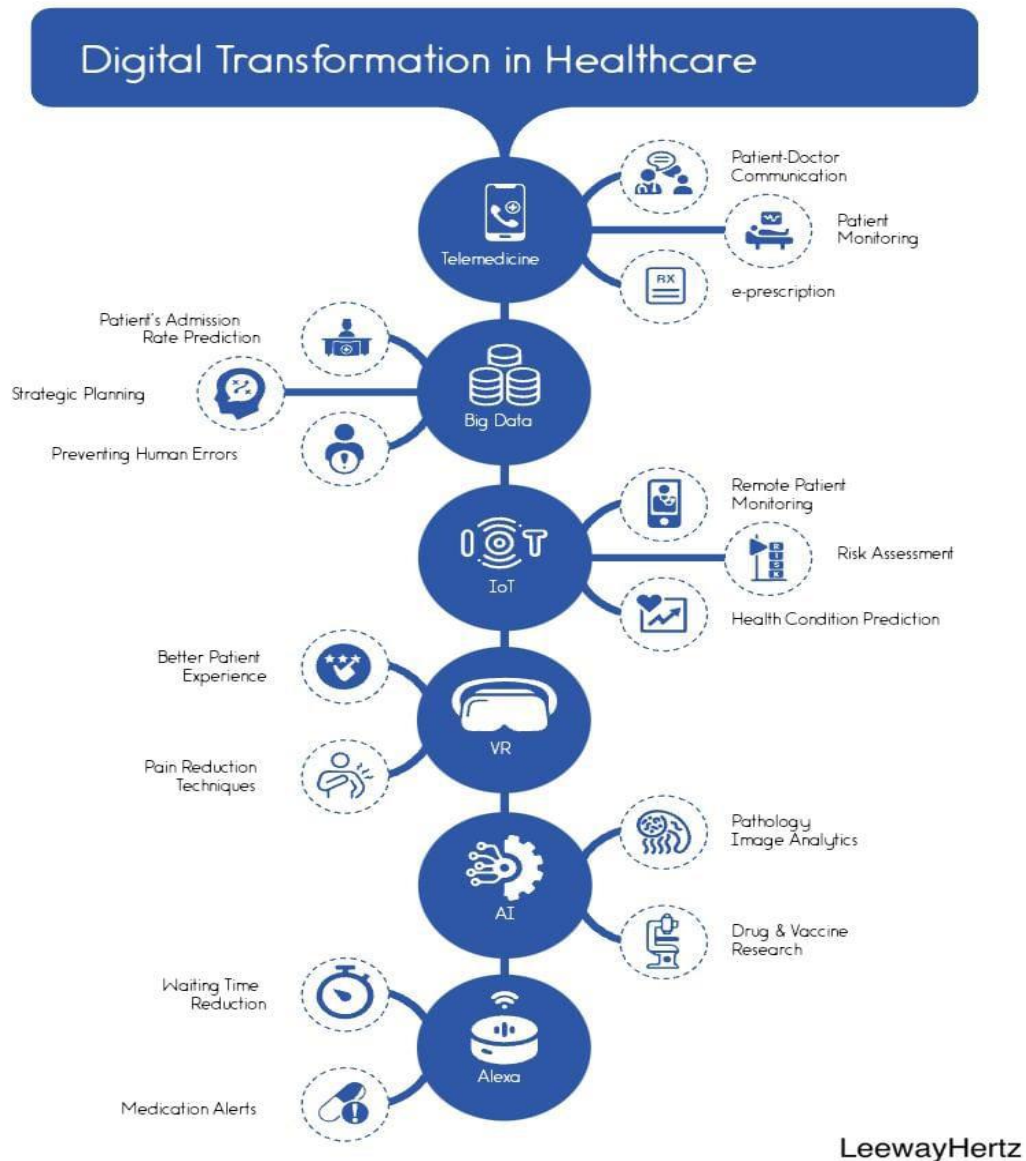
Information and Communication Technology (ICT) is revolutionizing many sectors but health sector is still lagging behind. Due to shortage of healthcare facilities, people are not able to reach the medical facility in the early stage of disease; also processes in the hospital are more complex in nature. Digital Hospital is a concept contributing to enhancing personnel productivity, facilitating hospital operations, improving the process quality and ensuring patient safety by integrating cutting-edge technologies such as medical devices, smart information systems, facility control and automatic convey or systems, location-based services, sensors and digital communication tools into health processed.

### Need For Digitization and Its Advantages

To do the digitization of cooperative hospital services and clinical out come, is a needs assessment and gap analysis of present processes for what is and what needs. How much time the staff, patient and providers take in current system and how much time it saves after digitization needs to be assessed. There is a need for customization and optimization of the digitization process and estimation of how much time it will be essential for a purposeful system to be monitored. Comprehensive workflow study of what needs to be digitized and what are the predictable outcomes has to be studied.

### Conceptual Framework for Digitization of Cooperative Hospital

The guiding philosophy of digitization framework include: patient-centered care together with feedback of patient satisfaction, resourceful and affordability, real time and chronological access, tracking of actions and early warning system, and revelation of all activities in one framework.



## Review of Literature

1.S.M.Surya, Dr.Tamilmani, et al. , The impact of strategic human resource management on cooperative hospital performance in Kerala, international journal of creative research thoughts IJCRT Volume 10, Issue 1 January 2022 | ISSN: 2320-2882.

The study was access to the usefulness of strategic Human Resource Management with performance to development of cooperative hospitals. The study will examine cooperative hospital a holistic view on the extent to which performance, reward systems, recruitment and planning could aid cooperative hospital productivity, profitability, competitive advantage and development. The study will assess to the existing Literature on SHRM practices and Cooperative hospital growth.

2. Taşkın kiliç et al., digital hospital; an example of best practice, International Journal of Health Science Research and policy, Volume 1, Issue 2; 2016 .

The primary aim of this study is to address the theoretical and practical aspects of “Digital (paperless) hospital” concept, which is addressed in a limited number of studies, and investigate the digital hospital practices of Izmir Tire Public Hospital and Giresun Tirebolu Public Hospital, which entered into the list of top digital hospitals in Europe as examples of best practices.

3. Nishikant Bele, Sanjiv Kumar, Jigmi Singay et al., Digitization of Hospital Services and Operations:A Conceptual Framework, International Journal of Healthcare Education & Medical Informatics Volume 5, Issue 1 - 2018, Pg. No. 1-5.

The study was analysis to Information and Communication Technology (ICT) is revolutionizing many sectors but health sector is Lagging in adopting ICT. In the manual system, much of the data is difficult to access and is not available in real time. There is lack of coordination between clinical service providers (doctor, nurse, patient and management) and other services such as pharmacy, procurement, laboratory and radiology. Digitization of hospital is vital in providing quality and cost-effective services to patients and improving support services.

This paper aims to analyses the changes taking place in the field of healthcare due to digital transformation. For this purpose, systematic bibliographic review is performed, utilizing Scopus, Science Direct and PubMed databases from 2008 to 2021. Our methodology is based on the approach by Westar and Watson, which classify the related articles based on a concept-centric method and an ad hoc classification system which identify the categories used to describe areas of literature.

## Methodology

The aim of this study was to assess the effects of digitalization cooperative hospital on clinical outcomes and patient satisfaction.

**Research design:**The research design is a non-experimental and was a survey based study.

**Population:**Accessible population was adapted in this study.

**Sampling size:**72 subjects are included in this study.

**Sample techniques:**Random sampling technique was adapted.

**Study place:**The subjects were selected from Co-Operative Hospital Thankamani, Idukki, and Kerala.

**Duration of the period:**Total duration of the study was 3 months.

### Procedure of study

A sample size of 72 Patients was included in this study. Initially, permission for doing research was received from the Patients by getting consent form.

Then details such as name, age, sex, Health issues was taken by using assessment form and the procedure was explained to the Patients.

The collected data was divided on the basis presence of Digitalization and Manual Health Records. The divided values were used to calculate mean, standard deviation and p value by using manual statistical principles. Finally correlation was calculated for with and without Digitalization based on Cooperative Hospital. That calculation was done by using Karl Pearson's correlation method.

Formulae such as,<sup>[3, 4]</sup>

$$r = \frac{\sum xy}{N \sigma_x \sigma_y}$$

Here,

r is correlation coefficient

$\sigma_x$  is standard deviation of series x

$\sigma_y$  is standard deviation of series y

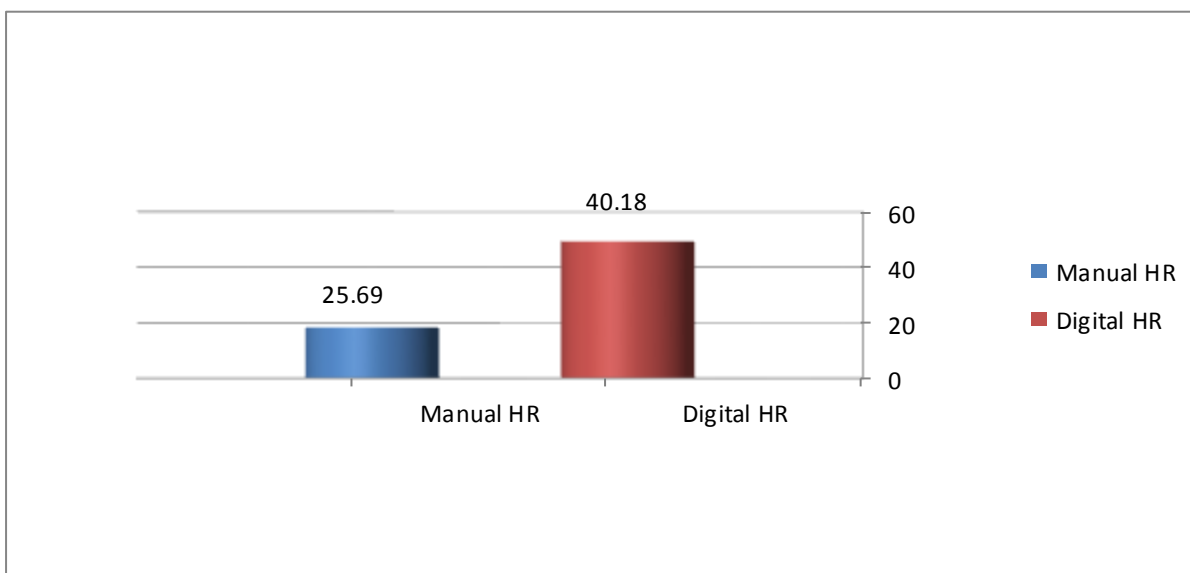
Correlation was found for analysing the relationship between. The results were tabulated and interpreted.

### Data Analysis and Results

**Table 1:** Comparison of manual and digilitasation in cooperative hospital

Category	Mean value	SD	P value	r value
Manual health records	18.33	7.64	0.1299	3.7532
Digilitasation health records	49.33	12.10		

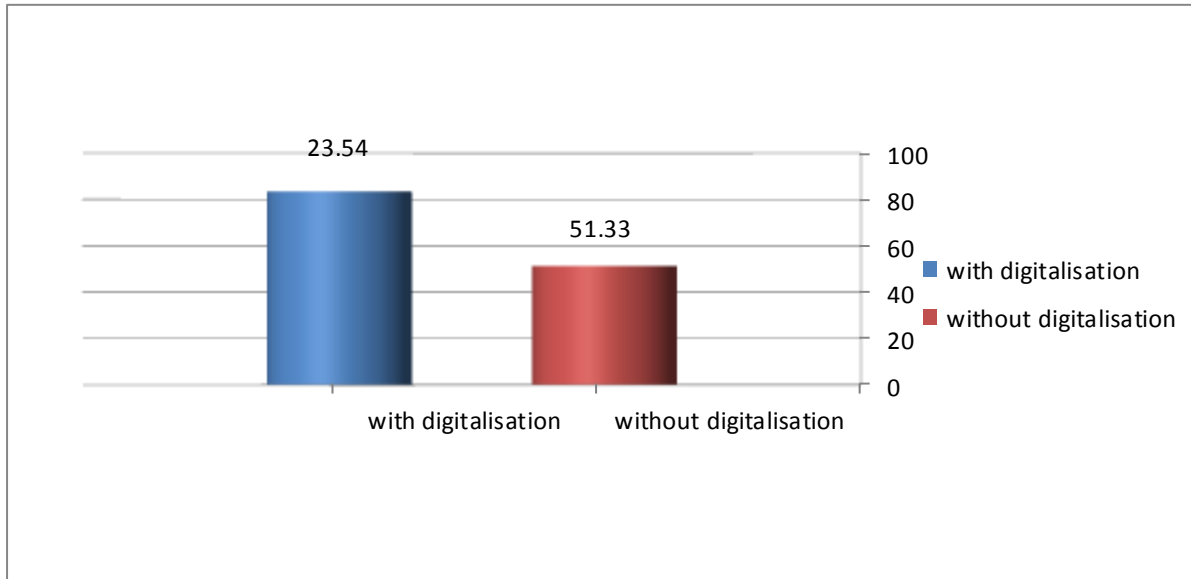
**Graph 1:**



**Table 2:** Comparison of clinical outcomes in cooperative hospital with and without digitalisation

Category	Mean value	SD	P value	r value
With digitalisation	83.33	6.11	0.0117	4.4002
Without digitalisation	51.33	11.02		

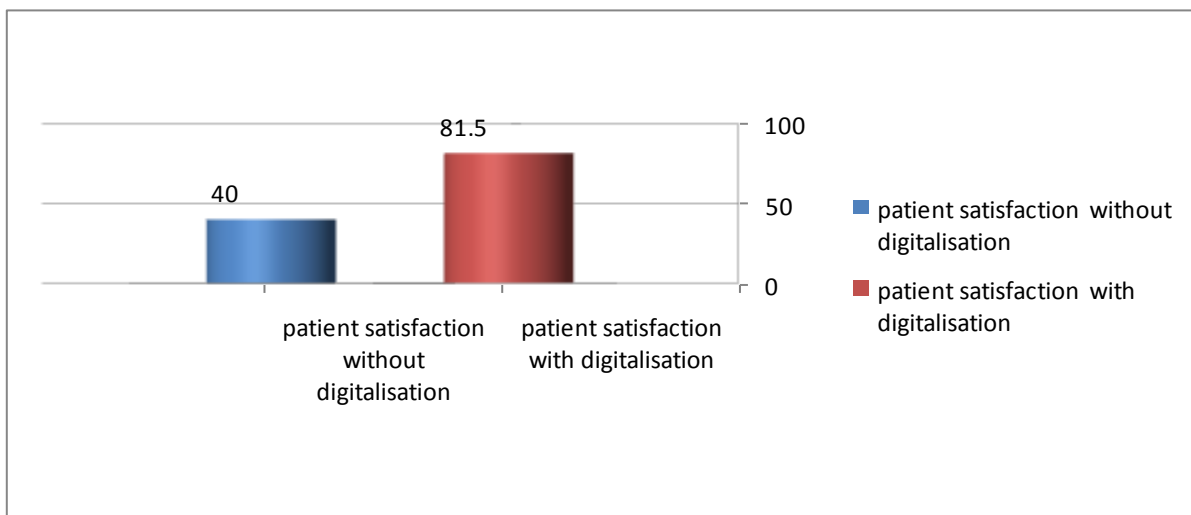
**Graph: 2**



**Table 3:** Comparison of patient satisfaction with and without digitalisation

Category	Mean value	SD	P value	r value
With digitalisation	81.50	10.66	0.0006	6.397
Without digitalisation	40.00	7.07		

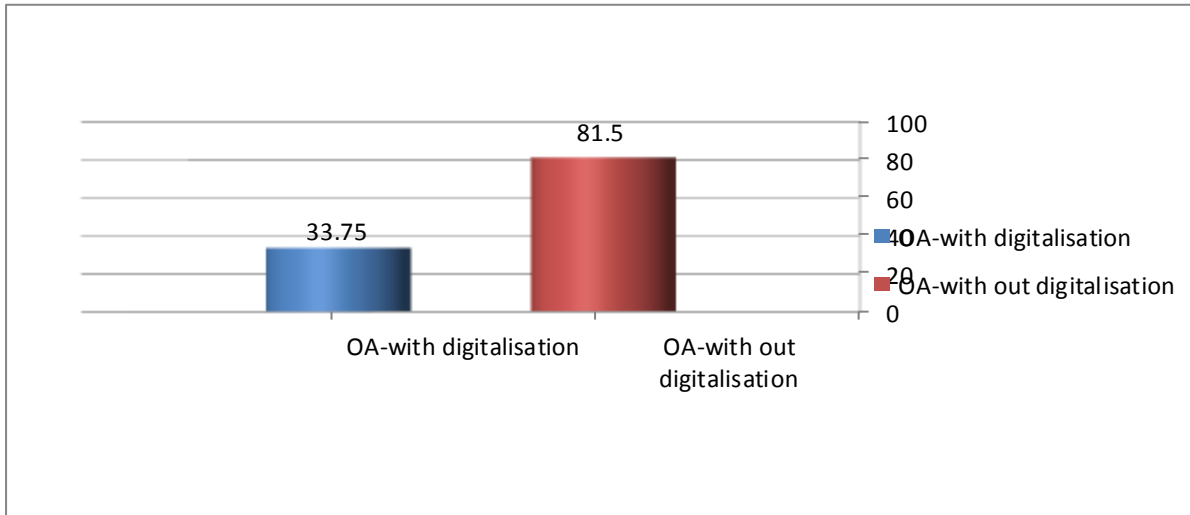
**Graph 3:**



**Table 4: Comparison of organisation & administration with and without digitalisation**

Category	Mean value	SD	P value	r value
OA-With digitalisation	33.75	11.81	0.0010	6.0011
OA-Without digitalisation	81.50	10.66		

**Graph 4:**



**Conclusion**

The framework presented in this paper helps us to recognize the suggestion of digitization method and related issues over the manual operation of the cooperative hospital. This framework is divided into four parts which is useful to identify the desires, issues and stakeholders so that correct in sequence will get in right time at right location. In the future, we will investigate the probability of framework to digitize the cooperative hospital clinical outcome and patient satisfaction.





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