

# Research on the Application of 6S Management in Improving Logistics Management of Modern Traditional Chinese Medicine Hospitals

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## Abstract

**Objective:** This study aims to explore the application effects of 6S management in improving logistics management of modern traditional Chinese medicine hospitals, with the goal of enhancing the level of hospital logistics management and service quality. **Methods:** Through literature review, on-site investigation, and case analysis, combined with the theoretical framework of 6S management method, this study deeply discusses the specific application and effects of 6S management in logistics management of modern traditional Chinese medicine hospitals. **Results:** The study found that the introduction of 6S management method can significantly improve the efficiency and quality of logistics management in traditional Chinese medicine hospitals, optimize work processes, improve the work environment, and enhance the collaborative ability and sense of responsibility of the management team. **Conclusion:** Based on the comprehensive research results, 6S management is of great significance in improving logistics management of modern traditional Chinese medicine hospitals, providing an effective way to enhance the overall operational level and service quality of hospitals.

## Keywords

6S Management, Modern Traditional Chinese Medicine Hospital, Logistics Management, Efficiency, Quality

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## 1. Introduction

In recent years, with the continuous development of society and the increasing demand for medical services, modern traditional Chinese medicine (TCM) hospitals, as important institutions providing TCM services, face numerous challenges in logistics management. The efficiency and quality of logistics management are directly related to the overall operational effectiveness and service levels of hospitals. Therefore, optimizing logistics management in TCM hospitals has become an urgent issue to be addressed (Xu & Leng, 2017; Xue, 2024). This study aims to explore the application effects of 6S management in enhancing the logistics management of modern TCM hospitals. Through in-depth research and analysis, the study seeks to provide practical guidance and experience summaries for improving logistics management levels and service quality in TCM hospitals, which is of positive significance for promoting their sustainable development. Specifically, this research will discuss the principles of 6S management, analyze the current state of logistics management in modern TCM hospitals, and study the application effects of 6S management in this context. The methodology will combine literature reviews, case studies, and field investigations. By collecting relevant literature, analyzing practical cases, and conducting in-depth research on the actual conditions of TCM hospitals, this study will investigate the application effects of 6S management in improving logistics management in modern TCM hospitals, providing empirical support and reference experiences for future research.

## 2. Overview of 6S Management

### 2.1. Basic Concepts of 6S Management (Liu et al., 2016)

6S management is a management method originating from Japan, which is an extension and improvement of the 5S management method. The 6S framework includes Sort, Set in order, Shine, Standardize, Sustain, and Safety, aiming to enhance workplace efficiency and quality through standardized management and continuous improvement.

### 2.2. Application of 6S Management in Different Fields (Chen, 2023; Li et al., 2019)

The 6S management method was initially widely applied in the manufacturing industry and has gradually been introduced to various sectors including the service industry, healthcare, and other fields. Implementation of 6S management in different domains can optimize work environments, improve work efficiency, reduce error rates, and enhance overall performance and quality levels.

### 2.3. Principles and Implementation Steps of 6S Management (Rother & Shook, 2003)

**Sort:** Eliminate unnecessary items, retain essential items, and categorize items.

**Set in order:** Plan and determine the rational placement of items to ensure easy access and use.

**Shine:** Maintain workplace cleanliness by regularly cleaning work areas and equipment.

**Standardize:** Establish standard operating procedures and cleanliness standards to ensure consistent execution.

**Sustain:** Cultivate good work habits and discipline among employees to sustain the state of sorting, setting in order, shining, and standardizing.

**Safety:** Focus on workplace safety to ensure employee health and safety and prevent accidents.

### **3. Current Status of Logistics Management in Modern TCM Hospitals**

#### **3.1. Importance of Logistics Management in TCM Hospitals (Ye, 2015; Zou, 2010)**

Logistics management in TCM hospitals plays a crucial role in the normal operation and service quality of hospitals. It involves facilities and equipment, material procurement, sanitation, safety, and other aspects directly impacting the efficiency, service level, and medical quality of hospitals. Therefore, the standardization and optimization of logistics management are vital for the development of TCM hospitals.

#### **3.2. Issues and Challenges in Logistics Management (Chen, 2023; Wei & Jia, 2024)**

##### **3.2.1. Non-Standard Material Management**

Disordered material management in hospitals leads to inventory backlog and waste, affecting the timeliness and efficiency of medical services.

##### **3.2.2. Inadequate Maintenance of Facilities and Equipment**

Severe aging and inadequate maintenance of facilities and equipment in some TCM hospitals affect the quality and safety of medical services.

##### **3.2.3. Inadequate Sanitation Management**

Some TCM hospitals have blind spots and corners in sanitation management, which can breed bacteria, impacting the health of patients and staff.

##### **3.2.4. Inadequate Safety Management**

Incomplete safety management systems in hospitals pose safety hazards and accident risks, necessitating enhanced safety awareness and implementation of management measures.

Addressing these problems and challenges by adopting effective measures and management strategies to optimize the logistics management of TCM hospitals and enhance work efficiency and service quality is a pressing issue that needs to be tackled.

## 4. Application of 6S Management in Modern Traditional Chinese Medicine Hospital Logistics Management

### 4.1. Feasibility Analysis of 6S Management in Traditional Chinese Medicine Hospital Logistics Management (Huang et al., 2017)

6S management, as a systematic management method, has high feasibility in the logistics management of traditional Chinese medicine hospitals. By implementing 6S management, traditional Chinese medicine hospitals can optimize material management, improve facility maintenance efficiency, strengthen hygiene and cleanliness management, and enhance safety management, thereby enhancing the overall level of logistics management, and improving work efficiency and service quality.

### 4.2. Impact of 6S Management on Traditional Chinese Medicine Hospital Logistics Management (Chen et al., 2021)

**Improved work efficiency:** By employing methods such as sorting, straightening, sweeping, cleanliness, discipline, and safety management, the logistics workflow of the hospital can be standardized and made more efficient, thereby enhancing work efficiency.

**Enhanced service quality:** Standardized logistics management can enhance the overall image of the hospital, increase patient and staff satisfaction, and improve service quality.

**Cost reduction:** By reducing waste and improving resource utilization, 6S management can lower the cost of logistics management in traditional Chinese medicine hospitals, thereby increasing economic benefits.

**Creating a safe environment:** 6S management emphasizes safety management, helping traditional Chinese medicine hospitals establish safety awareness and culture, reduce the likelihood of safety incidents, and create a safe working environment.

### 4.3. Key Issues and Solutions in the Implementation of 6S Management (Huang & Chen, 2024)

**Employee training and awareness improvement:** Key issues lie in employee engagement and execution, and solutions include strengthening training, motivation, and establishing reward and punishment mechanisms.

**Continuous improvement and supervision:** Key issues include the ability for continuous improvement and supervision mechanisms, with solutions involving the establishment of dedicated teams responsible for 6S management, regular evaluations, and feedback mechanisms.

**Resource allocation and management support:** Key issues include resource allocation and management support, with solutions comprising proper resource planning, and establishing clear implementation plans, and objectives.

## 5. Case Study

### 5.1. Practical Case of Introducing 6S Management in a Traditional Chinese Medicine Hospital

In addressing the challenges in logistics management, a traditional Chinese medicine hospital decided to introduce 6S management for improvement. The hospital formed a 6S management team, and organized training and implementation of 6S management for all staff. The team first researched and analyzed the current status of hospital logistics management, and then developed a plan and objectives for implementing 6S management. During the implementation process, the team progressed in stages, starting with pilot testing in some departments or areas, and gradually expanding to the entire hospital. By managing aspects like sorting, straightening, sweeping, cleanliness, discipline, and safety, the hospital established a standardized logistics management process, reinforcing staff's sense of responsibility and management awareness (Zhou, 2023; Lou, 2021).

### 5.2. Case Study Results and Effectiveness Evaluation (Li et al., 2021)

**Improved work efficiency:** After implementing 6S management, the efficiency of the hospital's logistics management significantly increased. Material management became more standardized, facility maintenance more timely, hygiene and cleanliness management more thorough, safety management more comprehensive, and workflow smoother.

**Enhanced service quality:** Standardized logistics management led to a better service experience, with patients and staff providing higher evaluations of the hospital's overall image and service quality. Patient and staff satisfaction notably increased.

**Cost control:** By reducing waste and improving resource utilization, the hospital effectively controlled logistics management costs, leading to enhanced economic benefits.

**Safety environment:** The hospital fostered safety awareness and culture, improved safety management levels, significantly reduced the occurrence of safety incidents, and created a secure working environment.

In conclusion, the introduction of 6S management had a positive impact on a specific traditional Chinese medicine hospital's logistics management, enhancing work efficiency, service quality, cost control, improving safety environment, and laying the foundation for sustainable development.

## 6. Discussion and Analysis

### 6.1. The Promoting Role of 6S Management in Modern Traditional Chinese Medicine Hospital Logistics Management (Zou, 2019)

6S management plays a crucial promoting role in modern traditional Chinese medicine hospital logistics management. Through 6S management, logistics man-

agement processes can be standardized, work efficiency improved, resource utilization optimized, safety awareness strengthened, service quality enhanced, and overall management level raised. This systematic management method can help traditional Chinese medicine hospitals establish sound management mechanisms, and promote management innovation, and continuous improvement.

## **6.2. Advantages and Limitations of 6S Management in Traditional Chinese Medicine Hospital Logistics Management (Zhang, Lu, & Jin, 2019)**

**Advantages:** Improved work efficiency: Standardized management processes can enhance work efficiency, reducing time and resource waste. Enhanced service quality: Standardized management can improve service quality, enhancing patient and staff experiences. Cost reduction: By reducing waste and improving resource utilization, costs can be effectively controlled. Enhanced safety management: Fostering safety awareness helps reduce safety risks.

**Limitations:** High implementation costs: Training and implementation require significant human and material resources. Long-term commitment: Achieving lasting results necessitates long-term commitment from all hospital staff, posing challenges in execution.

## **6.3. Analysis of the Sustainability and Long-Term Effects of 6S Management (He, 2023; Wan & Xu, 2024)**

The sustainability of 6S management in hospitals relies on the commitment of leadership, the engagement and execution capabilities of employees, and the ability to implement continuous improvements. To maintain long-term effectiveness, hospitals must establish comprehensive supervision and feedback mechanisms, regularly assess the execution of 6S management, and make necessary adjustments and improvements. Additionally, ongoing employee training is essential to enhance recognition and participation in 6S management, fostering a strong management culture. The continuous promotion and implementation of 6S management will contribute to ensuring the sustainability of long-term effects, providing lasting momentum for the improvement and development of logistics management in traditional Chinese medicine hospitals.

## **7. Conclusion and Outlook**

### **7.1. Summary of Research Findings**

Through the analysis above, it can be concluded that the introduction of 6S management has brought significant improvements and enhancements to the logistics management of modern traditional Chinese medicine hospitals. The 6S management method, by standardizing management processes, improving work efficiency, optimizing resource utilization, enhancing safety management, and improving service quality, has created a more efficient, safe, and high-quality logistics management system for traditional Chinese medicine hospitals.

## 7.2. Insights of 6S Management in Improving Logistics

Management of Modern Traditional Chinese Medicine Hospitals 6S management provides profound insights into improving logistics management of modern traditional Chinese medicine hospitals: standardizing management processes can enhance work efficiency and service quality. Strengthening safety management by focusing on safety awareness cultivation and safety management can reduce safety risks. Continuous improvement through the ongoing implementation of 6S management can continuously enhance and optimize management mechanisms, achieving continuous improvement in management.

## 7.3. Suggestions for Future Research Directions

Future research on the application of 6S management in logistics management of traditional Chinese medicine hospitals could focus on the following aspects: in-depth study of the applicability and effectiveness differences of 6S management in traditional Chinese medicine hospitals of different scales. Explore the relationship between 6S management and hospital culture construction, staff training, and other factors to further improve management models. Integrate information technology to explore how to combine digital and intelligent means with 6S management to enhance management efficiency and level. Consider the application of 6S management in responding to emergencies and crisis management to enhance hospital emergency response capabilities. Study the long-term impact of 6S management on the development and competitiveness of traditional Chinese medicine hospitals and explore sustainable development paths.

Through continuous in-depth research and practice, it will help further improve the logistics management model of traditional Chinese medicine hospitals, enhance the overall management level of hospitals, and provide better support and guarantees for the sustainable development and service quality of traditional Chinese medicine hospitals.

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## Conflict of Interest Statement

Regarding the publication of this paper, all members of the research team hereby declare that there are no conflicts of interest related to the order of authorship.

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