

Inventory Management Practices for Essential Drugs at ABC Pharmacy Chain

This presentation explores strategies to bolster drug availability based on insights from the ABC Retail Pharmacy Chain's challenges in Ho Chi Minh City, emphasizing the impact of staff training, inventory control, and technology utilization, offering actionable recommendations for consistent availability and customer trust.

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INTRODUCTION

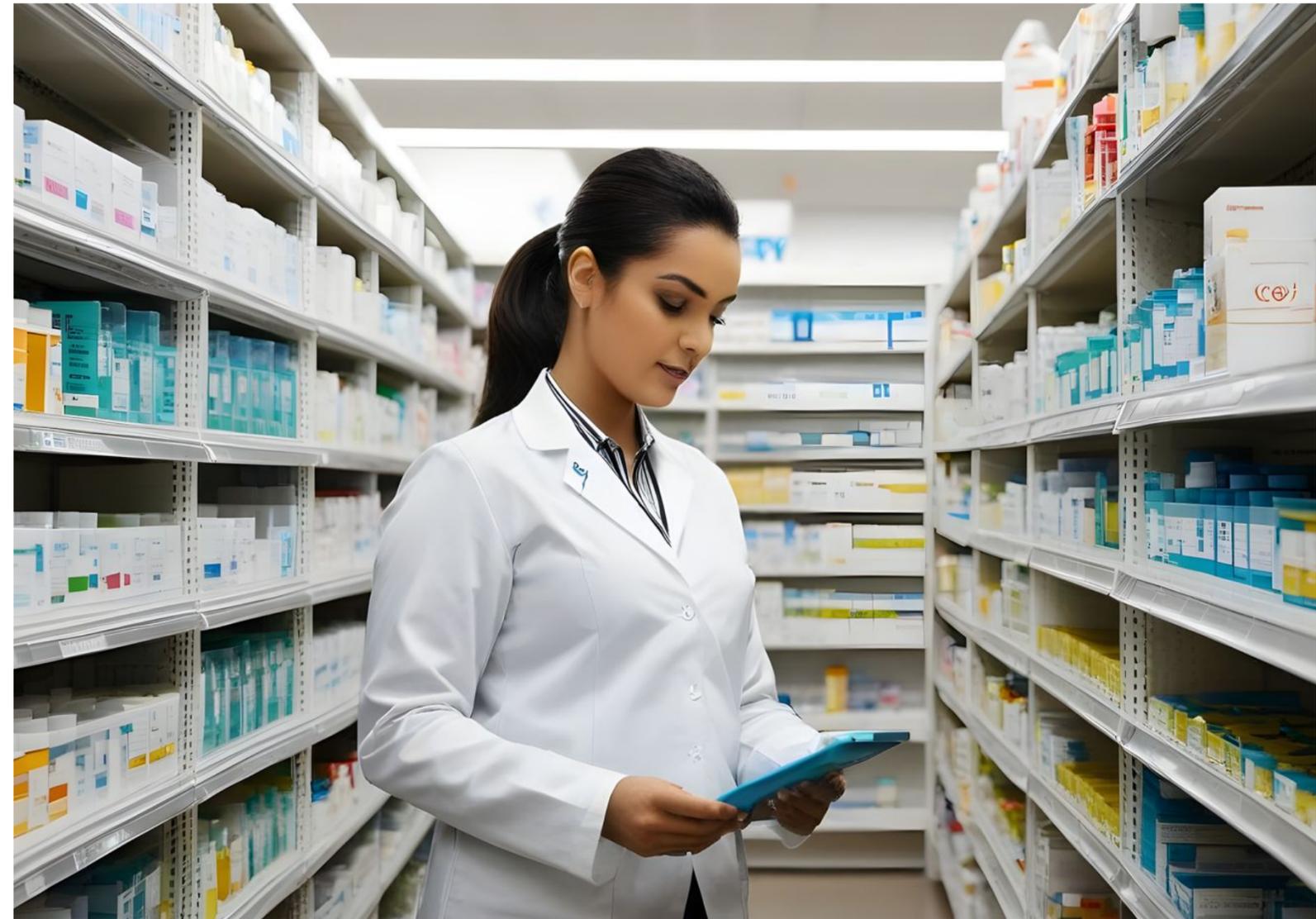


- **Essential drugs:** Foundation of healthcare, saving lives and managing illnesses worldwide (WHO, 2019).
- **Challenges:** Shortages and overstocking threaten patient care and cost efficiency (Nguyen et al., 2021).
- **Our research:** Exploring how optimized inventory control in ABC Pharmacy can unlock consistent availability of vital medications.
- **Goal:** Optimize inventory control for uninterrupted access to vital medications for ABC Company

INTRODUCTION

Research Background

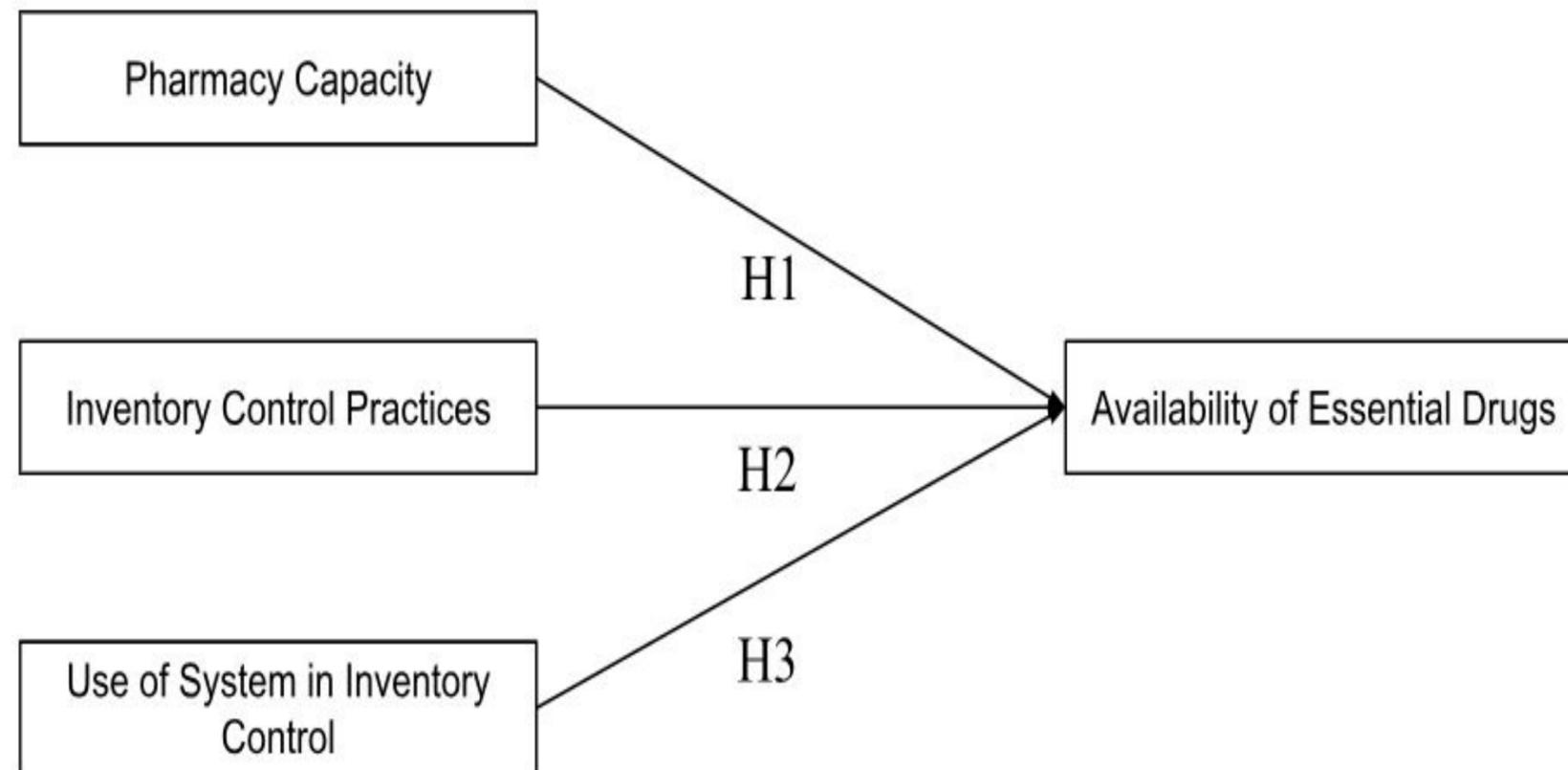
- Efficient inventory management fuels drug availability and better patient care. (Santhi & Karthikeyan, 2016).
- Leading Vietnamese drugstore chain ABC Pharmacy faces inventory challenges with inventory control, impacting essential drug availability within ABC (Internal Report, 2021).



Our research: Streamlining inventory flow for uninterrupted access to essential drugs.

INTRODUCTION

Research Framework



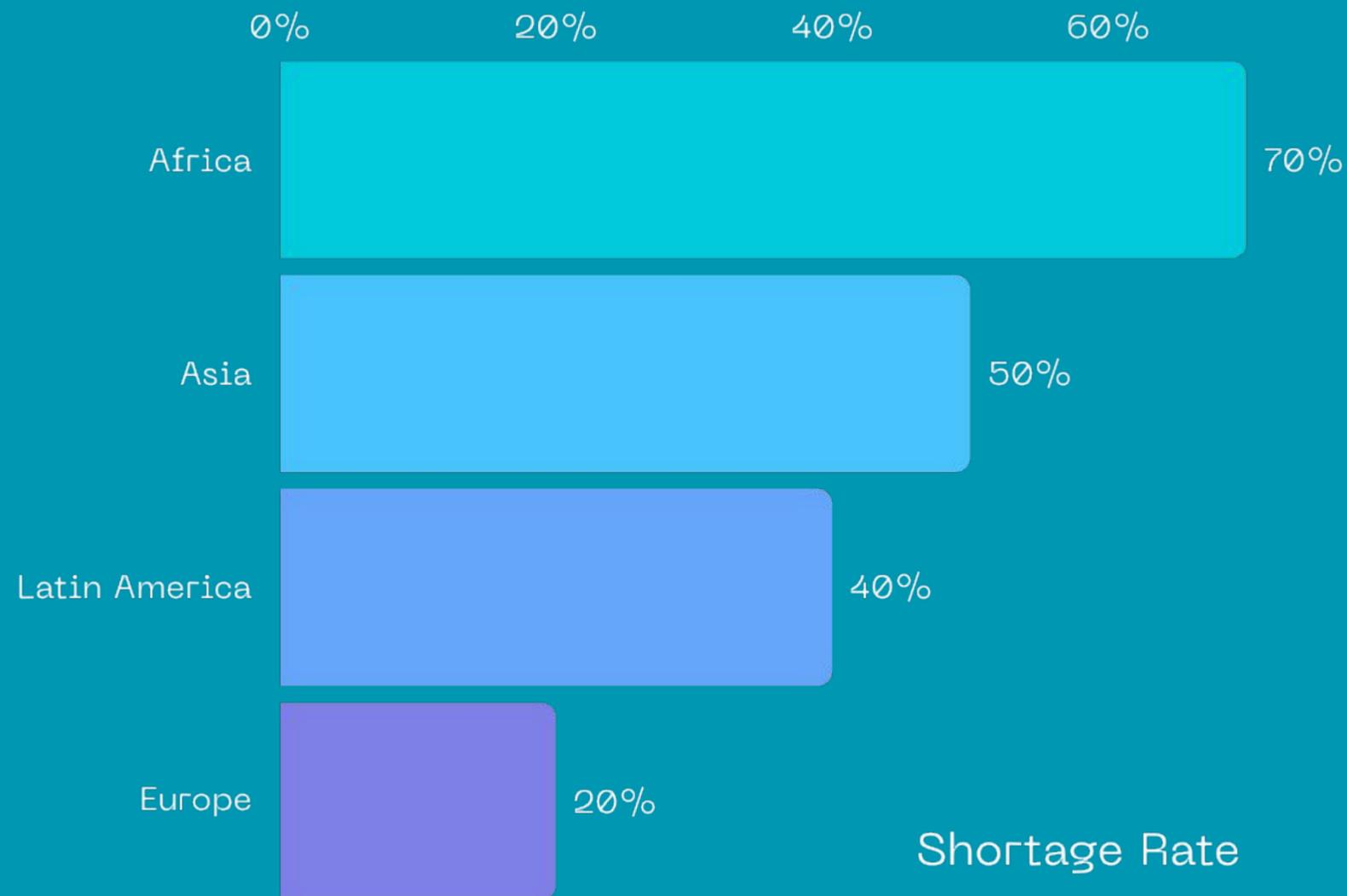
Hypotheses

- There is a relationship between Pharmacy Capacity and Availability of Essential Drugs (H1).
- There is a relationship between Inventory Control Practices and Availability of Essential Drugs (H2).
- There is a relationship between Use of System in Inventory Control and Availability of Essential Drugs (H3).

Literature Review

Importance of Essential Drugs

01



Regions like Africa and Asia face significant shortages in accessing essential drugs (World Health Organization, 2021).

- **Essential drugs: Global lifeline, yet 1/3 face shortages.** (World Health Organization, 2000).
- **Shortages lead to inadequate prescriptions, suboptimal practices, and poor health outcomes** (World Health Organization, 2007, 2015).
- **Stockouts, expiration, and waste: Indicators of inefficiency management** (Michael et al., 2019; Shukar et al., 2021).

- **Trained staff & clear procedures:** Key to optimal stock levels and reduced waste (Jobira et al., 2022).
- **Investing in capacity:** Combats training gaps and staff shortages (Manso & Annan, 2012; Management Sciences for Health, 2006).
- **Accurate data, assured availability:** Strong capacity ensures vital medicines reach those who need them most.



Literature Review

Inventory Control Practices

03

- Navigating inventory complexities (Jones Snow, 2011) ensures patient care & financial stability.
- Inefficiencies breed shortages, losses, and compromised care (FMOH, 2009; WHO, 2003).
- Precision, clear systems, and empowered staff pave the way to uninterrupted access (Manso & Annan, 2012; Godeliver et al., 2012).

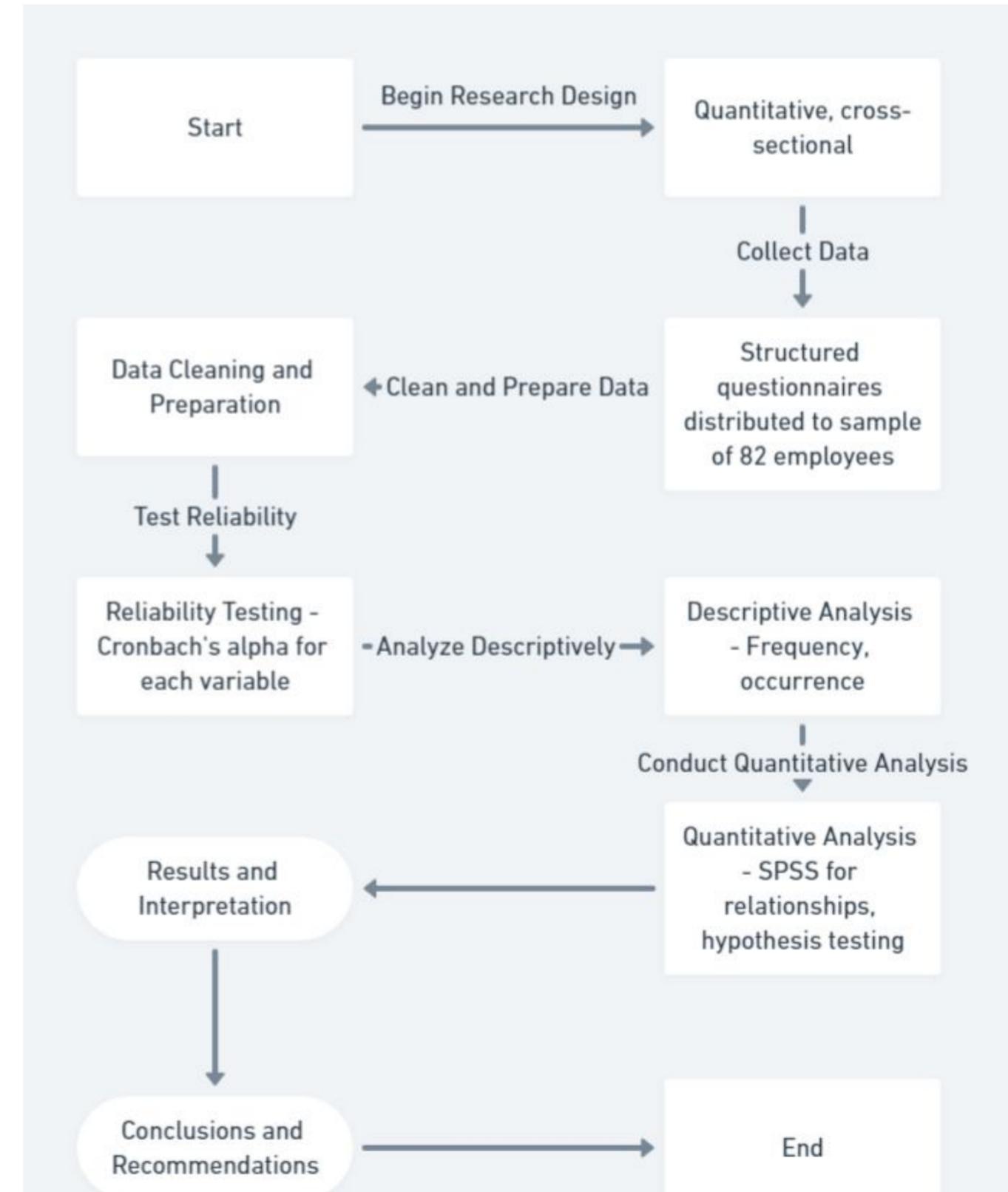
Technology Integration

04

- Smart software: Pharmacy information systems track stock in real-time, automate orders, and guide decisions (Oldland et al., 2015).
- Barcode precision: Scanning reduces errors, boosts accuracy, and strengthens inventory control (Oldland et al., 2015).
- Combined power: Technology unlocks efficient stock management for uninterrupted access to essential drugs.

Methodology

Target Population	Employees in ABC Pharmacy's 40 stores & 1 warehouse (n=126)
Sample Size	82 employees (65% of target population)
Data Collection Method	Structured questionnaires
Dependent Variable	Availability of essential drugs (5-point Likert scale)
Independent Variables	Pharmacy capacity, Inventory control practices, Use of technology
Data Analysis	<ol style="list-style-type: none"> 1. Reliability testing (Cronbach's alpha) 2. Descriptive analysis (frequency, occurrence) 3. Quantitative analysis (relationships, hypothesis testing using SPSS)



Results

Strong Reliability

All study measures demonstrated high reliability (Cronbach's alpha > 0.90).

Cronbach's Alpha	Cronbach's Alpha Based on Standardized Items	N of Items
.931	.932	6

Model Summary^b

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate	R Square Change	Change Statistics			Sig. F Change	Durbin-Watson
						F Change	df1	df2		
1	.803 ^a	.644	.631	.67422	.644	47.083	3	78	.000	1.741

a. Predictors: (Constant), Use of System in Inventory Control, Inventory Control Practices, Pharmacy Capacity

b. Dependent Variable: Availability of Essential Drugs

Collective Impact

These factors explain 64.4% of the variation in drug availability.

Results

ANOVA^a

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	64.207	3	21.402	47.083	.000 ^b
	Residual	35.456	78	.455		
	Total	99.663	81			

a. Dependent Variable: Availability of Essential Drugs

b. Predictors: (Constant), Use of System in Inventory Control, Inventory Control Practices, Pharmacy Capacity

Significant Impact

Pharmacy capacity, inventory control practices, and the use of inventory systems significantly influence the availability of essential drugs (ANOVA, $p < 0.05$).

		Pharmacy Capacity	Inventory Control Practices	Use of System in Inventory Control	Availability of Essential Drugs
Pharmacy Capacity	Pearson Correlation	1	.122	.245 [*]	.408 ^{**}
	Sig. (2-tailed)		.275	.026	.000
	Sum of Squares and Cross-products	110.469	13.712	30.617	42.825
	Covariance	1.364	.169	.378	.529
Inventory Control Practices	Pearson Correlation	.122	1	.107	.440 ^{**}
	Sig. (2-tailed)	.275		.338	.000
	Sum of Squares and Cross-products	13.712	114.636	13.629	47.004
	Covariance	.169	1.415	.168	.580
Use of System in Inventory Control	Pearson Correlation	.245 [*]	.107	1	.680 ^{**}
	Sig. (2-tailed)	.026	.338		.000
	Sum of Squares and Cross-products	30.617	13.629	141.062	80.640
	Covariance	.378	.168	1.742	.996
Availability of Essential Drugs	Pearson Correlation	.408 ^{**}	.440 ^{**}	.680 ^{**}	1
	Sig. (2-tailed)	.000	.000	.000	
	Sum of Squares and Cross-products	42.825	47.004	80.640	99.663
	Covariance	.529	.580	.996	1.230

*. Correlation is significant at the 0.05 level (2-tailed).

** . Correlation is significant at the 0.01 level (2-tailed).

c. Listwise N=82

Positive Relationships

Improvements in any of these three areas lead to enhanced drug availability (Pearson correlation > 0.40).

Discussion & Implications

for Practice

Prioritize Pharmacy Capacity:

- Invest in staff training and knowledge.
- Establish clear pharmacy policies and procedures.
- Foster management commitment to essential drug management.

Embrace Best-Practice Inventory Control:

- Implement techniques like EOQ, ABC analysis, and FIFO/FEFO.
- Ensure adherence to standard operating procedures (SOPs).

Leverage Technology:

- Adopt computerized inventory systems for accurate data and efficient processes.
- Utilize barcodes for error reduction and data capture.

for Research

The Power of MLR and ANOVA: These statistical methods effectively identify influential factors and uncover complex relationships in pharmacy management.

Future Research Directions:

- Explore broader research scope to encompass diverse pharmaceutical sectors.
- Delve deeper into the complex relationships between variables using advanced statistical methods.
- Analyze the impact of emerging technologies like AI and automation on inventory management and drug availability.
- Investigate the environmental and economic implications of various inventory control practices.

Conclusion & recommendations

- **Our research shows:** Strong pharmacy capacity, best-practice inventory control, and technology are key to drug availability.
- **The call to action:** Invest in training, implement efficient techniques, and embrace technology to optimize operations.
- **Future steps:** Broader research, deeper analysis, and exploring new technologies will pave the way for a secure future with accessible essential drugs for all.



**THANK
YOU**

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