Pharmacists Attitudes

Towards Drug And Poison Information Centers In Saudi Arabia

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- Status of DPICs.
- Definition of attitudes.
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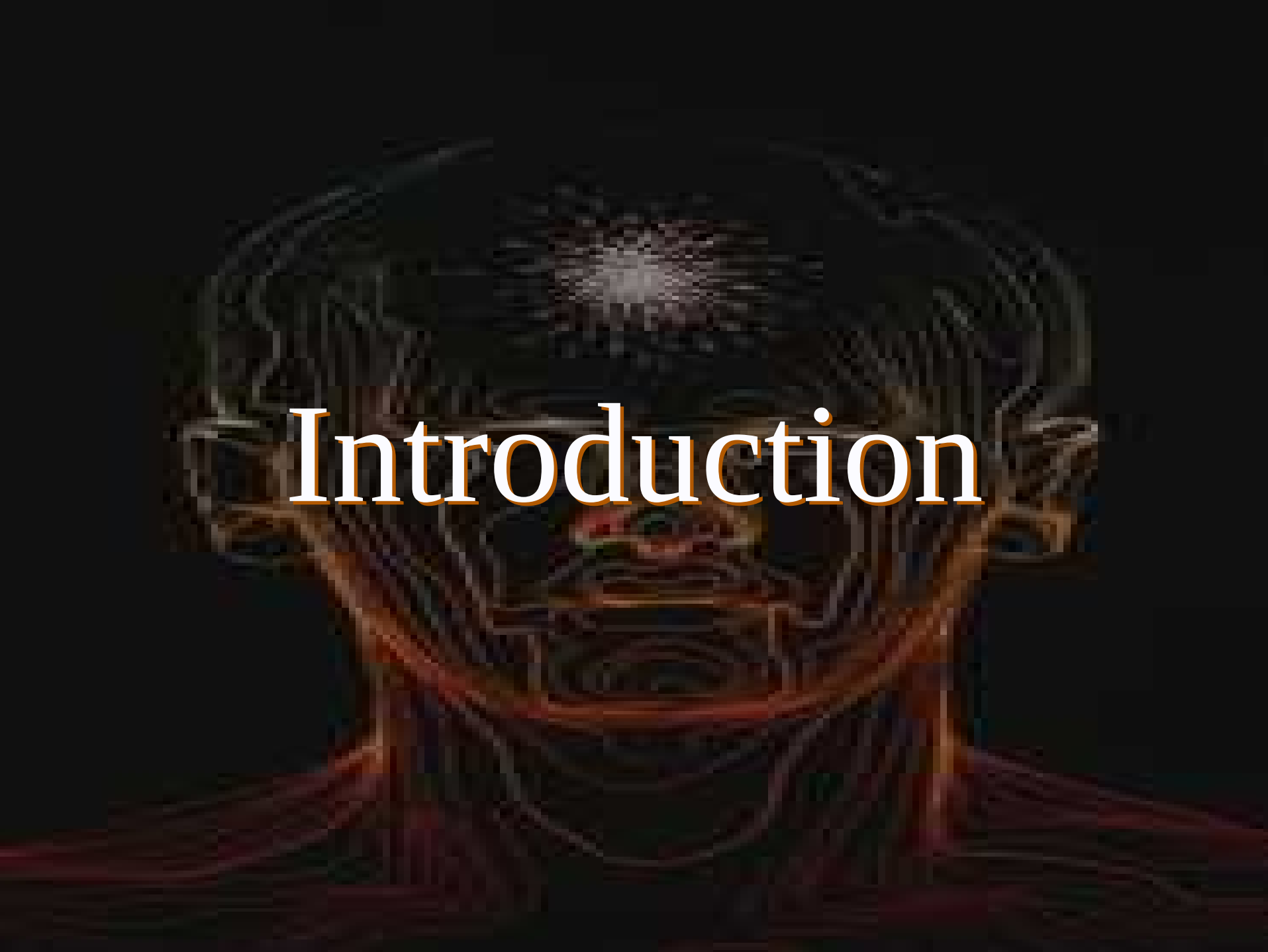
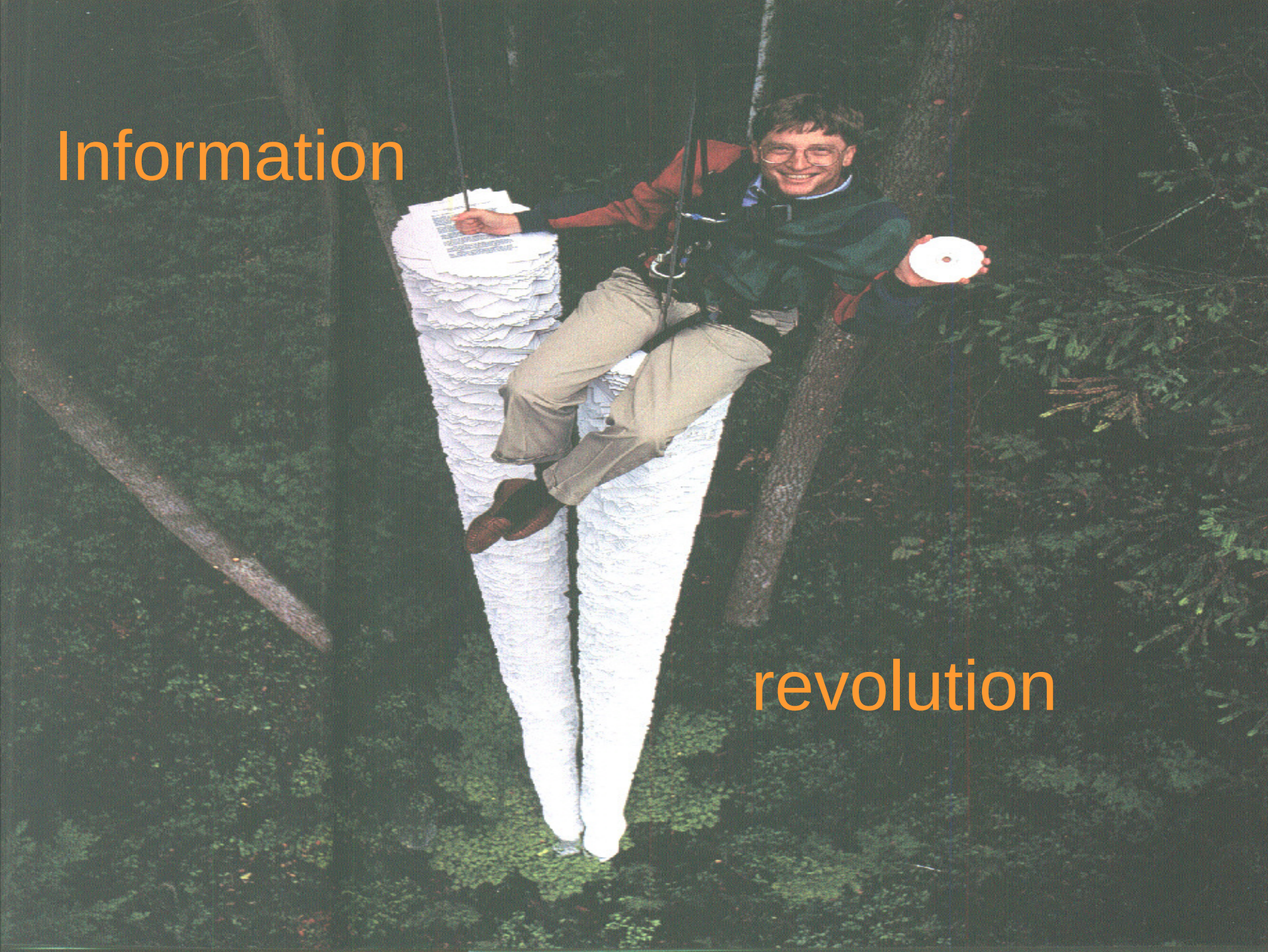

Introduction


Information
revolution

A. Pharmacist as DI provider

‘ Drug information and patient education provision makes the second greatest contribution to contemporary pharmacy practice ’

(The Scope of Pharmacy Practice Project, 1994)

B. Status of DPICs

- DICs.
- 1st. DIC, 1962, Kentucky
- 1st DIC in S.A., 1980,KSU- scope

- “ DICs are not operating to full potential ”

(Rosenberg, et al, 1983)

C. Attitudes:

Cognitive (behavior)

Emotional (feelings)

Attitudes and behavior

D. Literature search

1. “Physicians’attitudes towards the available systems are a major limiting factor in the use and acceptance of these resources ”

(Shumway JM, et al; 1996).

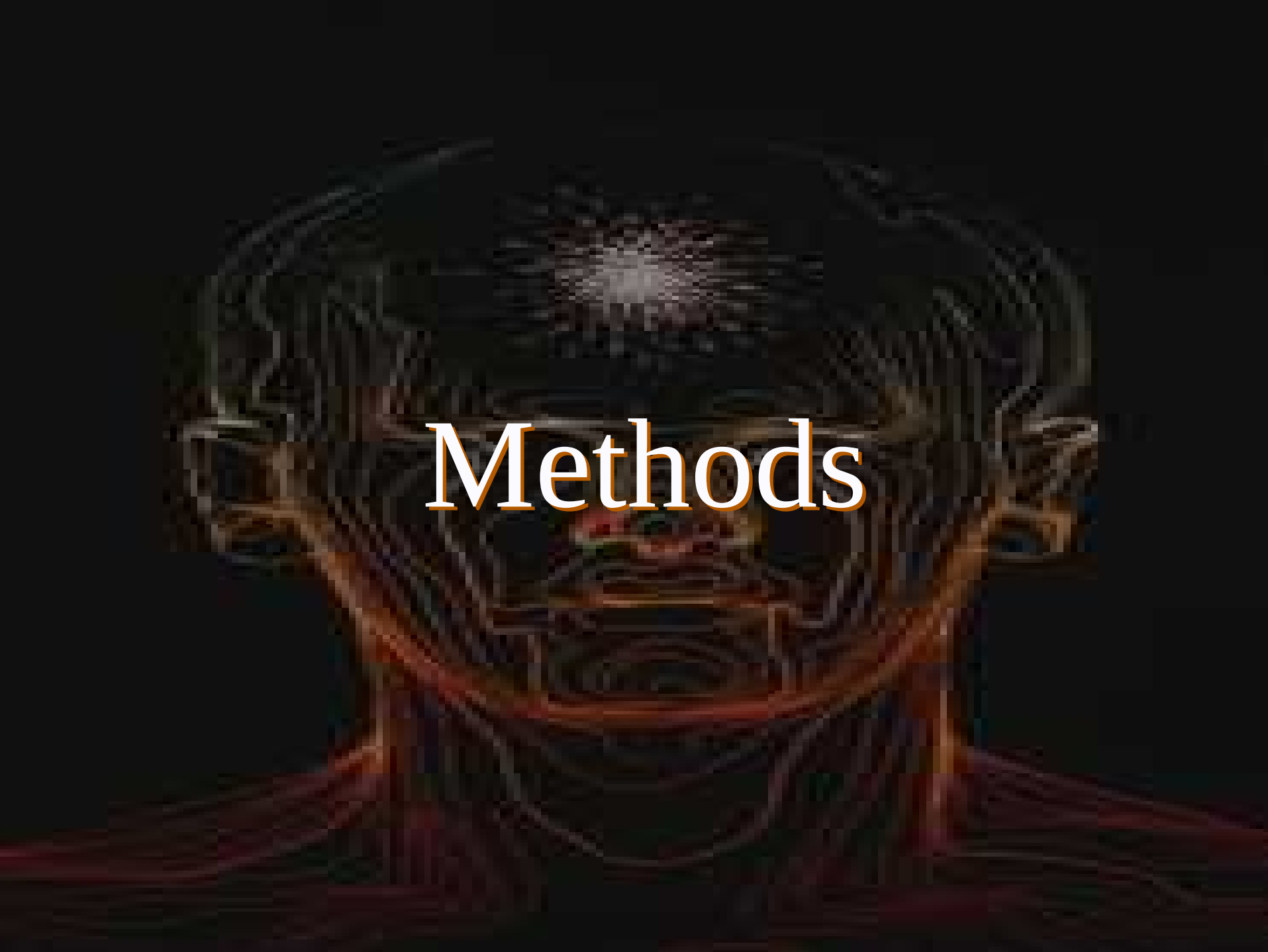
2. ShumwayJM, et al; 1990.
3. “Only 3.3% of those physicians who participated in the survey call the DPIC within the last 6 months ”

(Abou Auda HS, et al)


Objectives

- **The attitudes or behaviors of pharmacists towards DPICs in the Kingdom of S.A.**
- **To find out the extent of use of the DICs in S.A. by pharmacists.**
- **To study the attitudes of pharmacists to serve as DI providers to others.**
- **To find out the frequency of use of the DICs**

- **To find out the level of satisfaction of pharmacists with the performance of the DPICs in S.A.**
- **To find out, what are the types of information about drugs pharmacists may want to contact the DIC for, also when & what are the best times and ways of distributing the information.**
- **Finding out the reasons of not using DICs.**


Methods

- A six-page questionnaire.
- 45 questions.
- 600 pharmacists in S.A.
- Demographic data .
- The use of information resources.
- The DPIC.

Statistical analysis:

- SPSS Version 8.
- **The parametric tests** were:
  - t -test.
  - ANOVA.
- **The nonparametric tests were:**
  - chi-square.
  - Mann-Whitney / Wilcoxon Rank Sum test.
  - Kruskal Wallis.
  - Kendall tau-b.


Results

A. Demographic Data

- 1065 total number included
- **Male** **Female**

  927 (87.3%) 135 (12.7%)

- **age** **B.S.**

  22 - 67 ± (6.88) 989 (95%)

- **KSU** **Arab** **Asian**

  277 (37.3%) 425 (40%) 359 (34%)

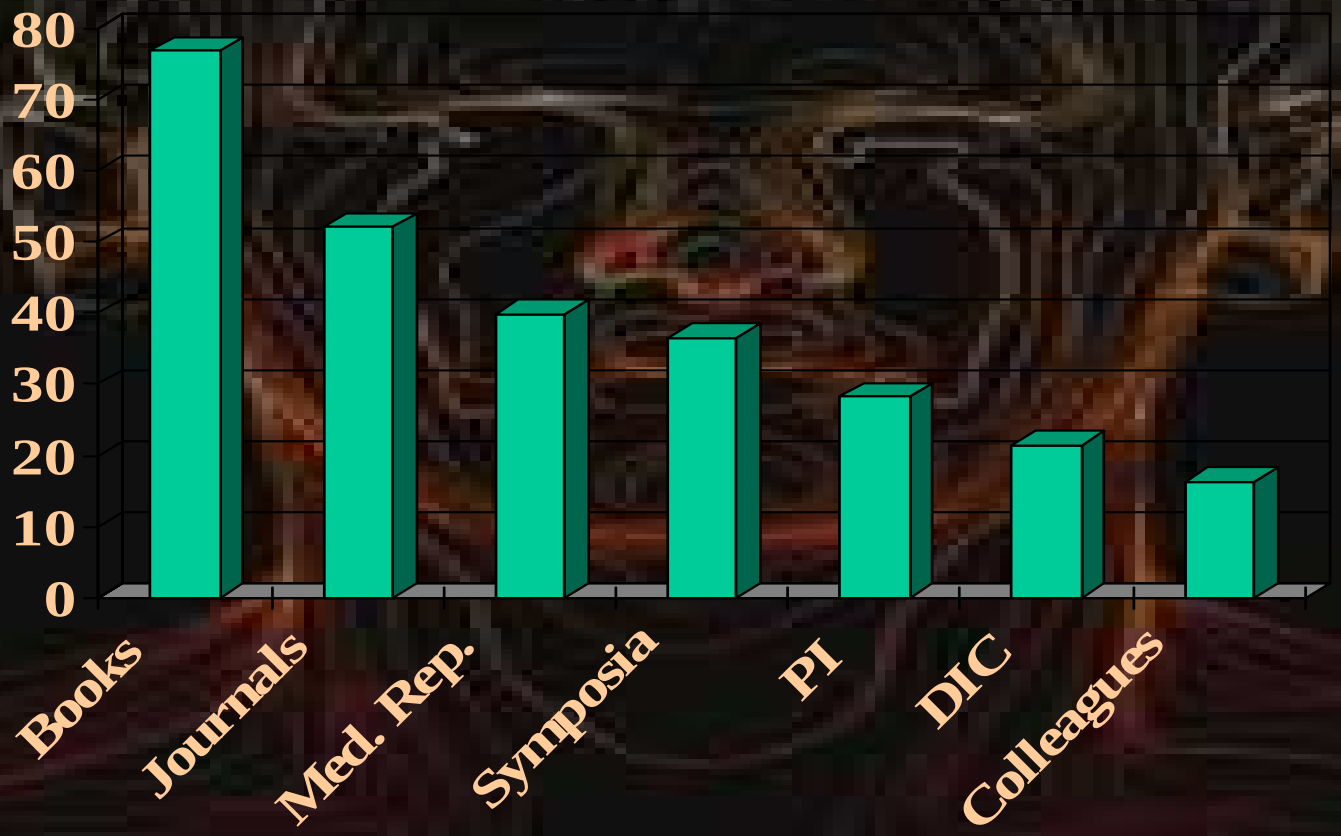
P.O.W.	Hospital Pharmacist	Community Pharmacist
	332 (31.4%)	425 (40.1%)
Aff iliation	Government sector	Private sector
	248 (23.8%)	726 (68.9%)

YSG

	YSG	P	S
Saudi	8.04 ± 5.112	<0.0001	S
Non. S	13.39 ± 6.06		
KSU	8.31 ± 4.45	<0.0001	S
Non. KSU	14.19 ± 6.08		
Hospital pharmacists	11.94 ± 6.81	<0.05	S
Community pharmacists	13.41 ± 5.99		

B. Use Of Information Resources

Source of new information about drugs:



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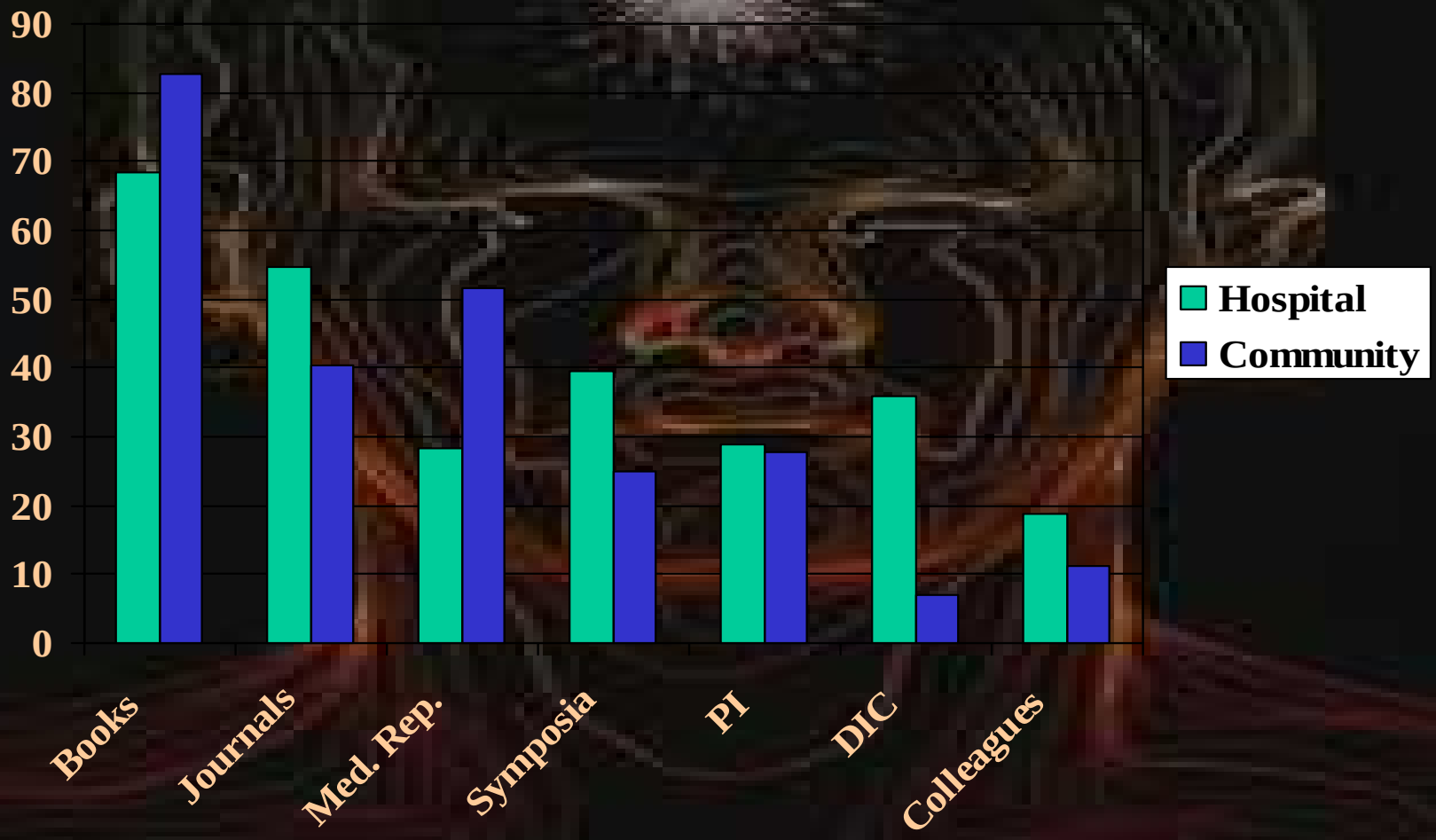
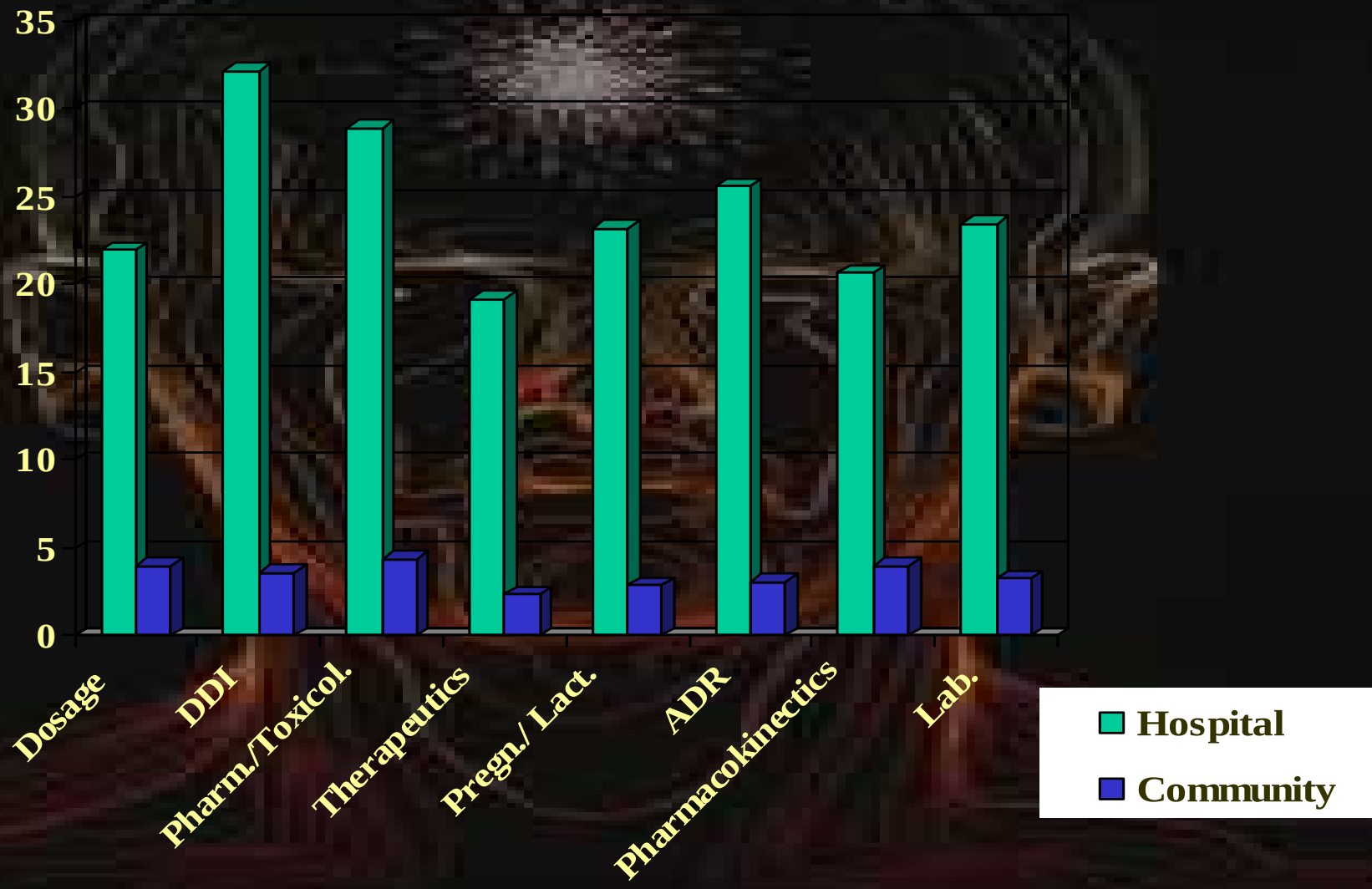


B. Use of Information Resources:

- **Types of information needed:**
  1. **DDI** **16.4%**
  2. **Pharmacol./Toxicol.** **15.9%**
  3. **ADR** **14.3%**
  4. **Preg./Lact.** **11.9%**
  5. **Lab. Tests** **11.7%**
  6. **Dosage** **11.5%**
  7. **Pharmacokinetics.** **10.7%**
  8. **Therapeutics.** **9. 3%**

Types of information usually needed upon calling DPIC :



Effort to obtain information in the last 6 months

	Hospital pharmacists	Private pharmacists
Twice a week	103 (32.7%)	76 (19.3%)
Once a week	79 (30.8%)	136 (34.5%)
Twice a month	46 (14.6%)	69 (17.5%)
Once a month	69 (21.9%)	113 (28.7%)

- 29.6% - conducted research
- 25.7% -published

	Hosp	Comm	KSU	Non KSU
	N (%)	N (%)	N (%)	N (%)
Depend on Knowledge	127 (44.3)	207 (64.1)	103 (41.5)	367 (59.9)
Ask fellow	44 (15.3)	35 (10.8)	53 (21.4)	68 (11.1)
Call DPIC	78 (27.2)	19 (5.9)	61 (24.6)	86 (14)
Search sources	156 (54.4)	126 (39)	136 (54.8)	265 (43.2)
Ignore request	8 (2.8)	6 (1.9)	9 (3.6)	12 (2)

Give information with out being asked to do so

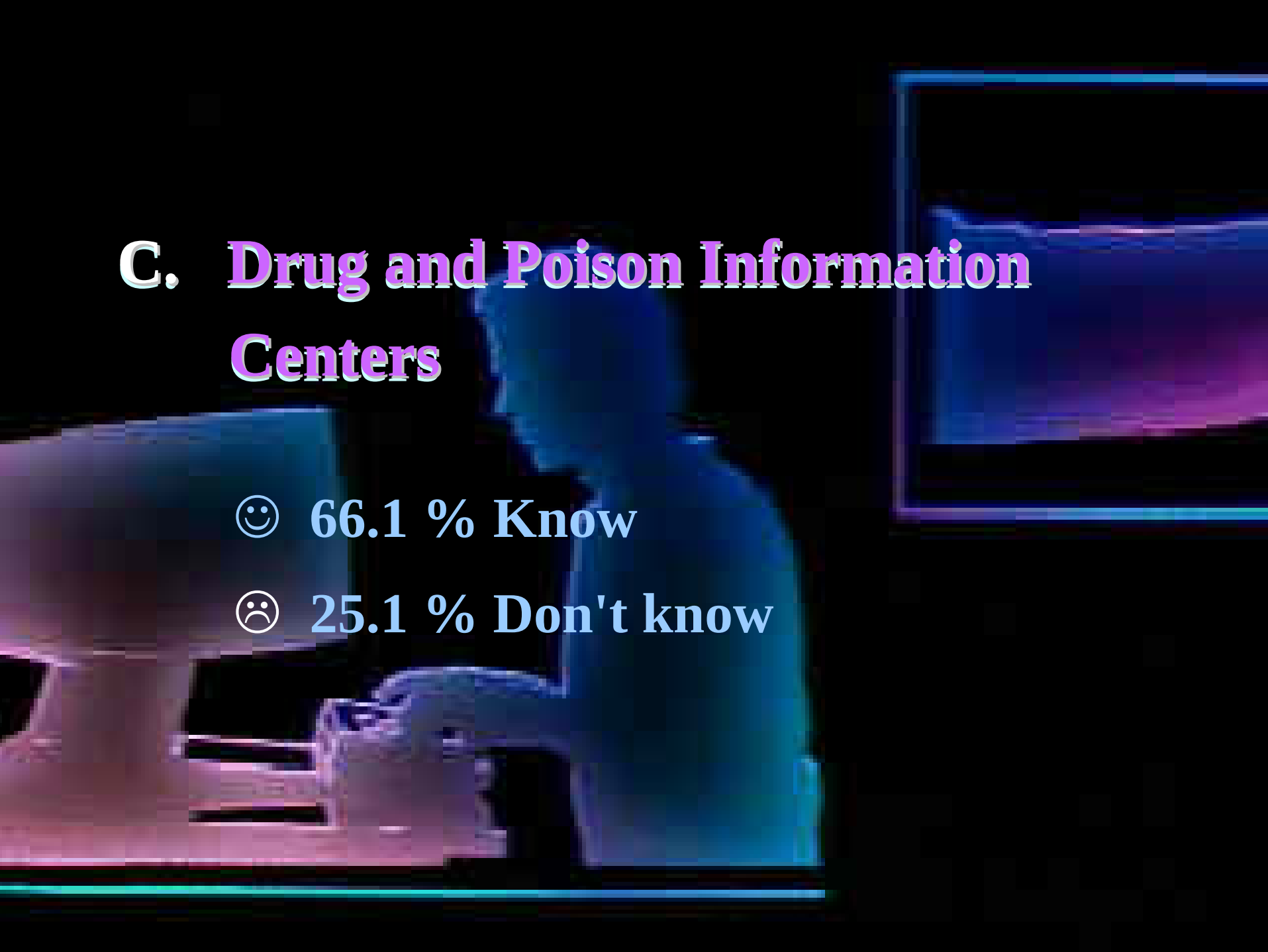
	Hosp.	Comm.	Female	Male
	N (%)	N (%)	N (%)	N (%)
Nature of work implies this	97 (30.2)	161 (39.9)	418 (47)	25 (18.8)
I know they'll ask	37 (11.5)	38 (9.4)	81 (9.1)	13 (9.8)
It's my obligation	97 (30.2)	83 (20.5)	178 (20.1)	39 (29.3)

Journals: 43% subs., 36.5% read journals regularly, 12.2% do not read

%	Hosp. Comm.	Saudi Non - Saudi	Male Female	KSU Non KSU	Gov. Priv.	B.S. Higher
Subs.to journals	42.9%	54.2%	44.7%	54.7%	46.2%	42.1%
	33.3%	40.5%	30.1%	38.8%	41.4%	63.8%
Read Journals reg.	38.8%		37.9%	40.7%	34.5%	35.7%
	30.8%	36.5%	26.9%	35.1%	36.4%	55.3%

Journals / Age

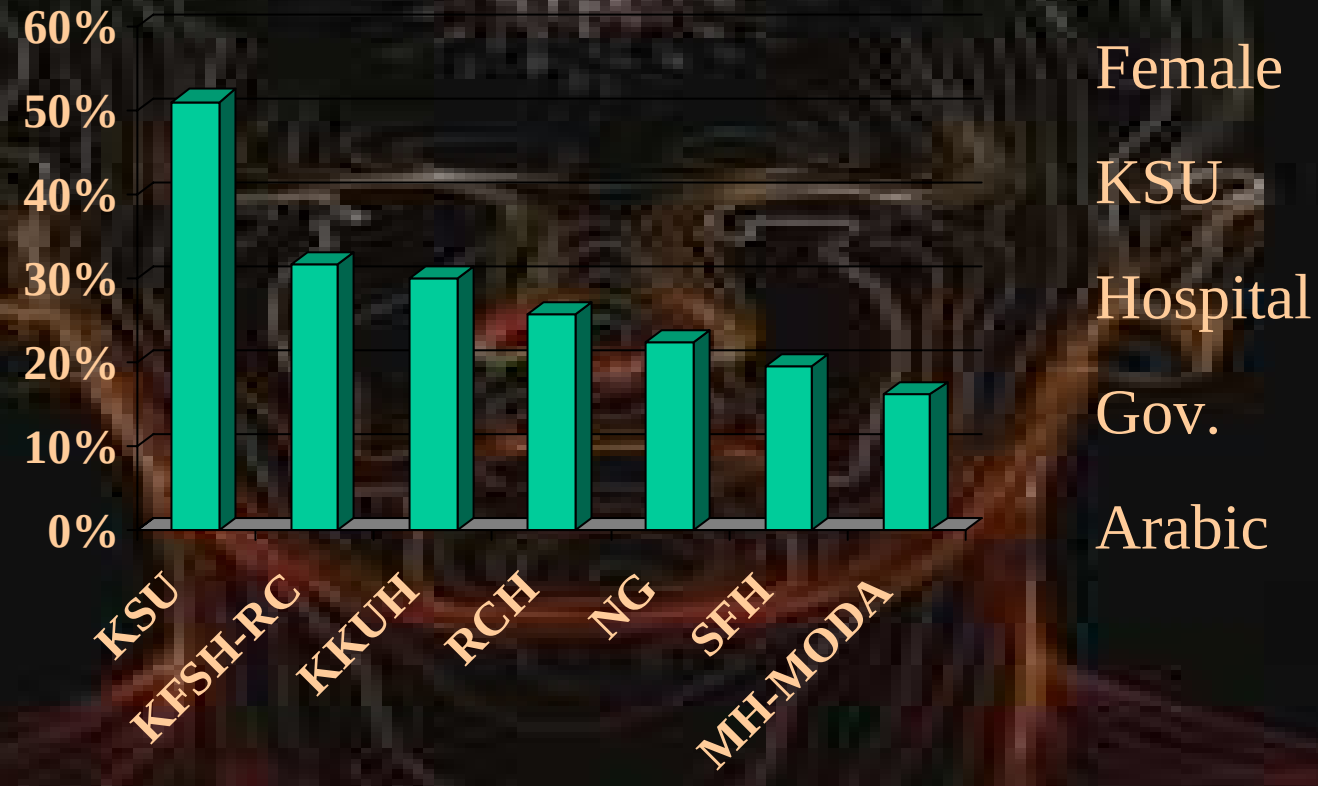
Age	Subscription to journals	Read Journals Reg.
< 30	151 (46%)	108 (32.3%)
30-39	144 (39.4%)	180 (36.4%)
40-59	72.45 (45%)	68 (42.2%)



C. Drug and Poison Information Centers

- ☺ 66.1 % Know
- ☹ 25.1 % Don't know

Centers Known to the Pharmacists



C. Drug and Poison Information Centers

Functions of DPIC

- 289 = 27.9% all functions
- 460 = 45% partially familiar
- 270 = 29.1 % Do not know
- KSU, 49.5% all
- Hosp. Pharmacists, 44.6% partially
- Saudis, 53.6% all

C. Drug and Poison Information Centers

Training

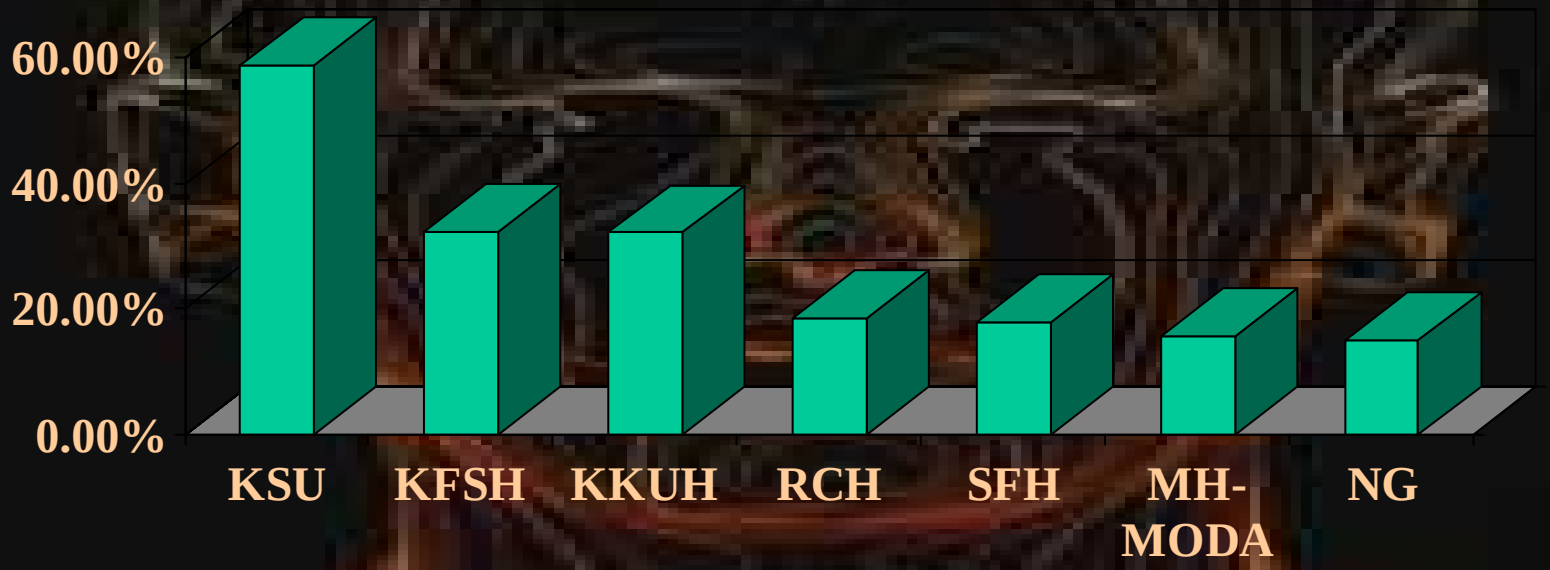
- 289 = 27.7% received training
- 750 = 72% did not receive training
  - KSU
  - Hosp.
  - Gov.
  - Arabs
  - Females

C. Drug and Poison Information Centers

Contacted DPIC

- 40% Yes
- 58.3% No
  - KSU (744 VS. 28.4%)
  - Hosp. (63 VS. 15.3%)
  - Gov. (63.3 VS. 30.6%)
  - Arabs (46.9 VS. 41.9%)
  - Saudis (78.5 VS. 32.4%)
  - Females (62.2 VS. 37.1%)

Centers Most Frequently Contacted



Centers Known to the Pharmacists

Level of satisfaction with the performance

- **85.3% Satisfied**
- **7.9% Not satisfied**
- **6.7% No response**

Performance rating

- **57% Efficient**
- **27% Highly efficient**
- **7.9% Inefficient**
  - **KSU - Non KSU**
  - **Hosp.**
  - **Gov. / Privat.**
  - **Saudis non Saudis**

Encouraged colleague:

- **79.5 %** **YES**

No. Of Calls during last 6 months:

- **412 pharmacists Two calls at least**
- **1.79 ± 0.8 calls**

Format of answer:

- **Written (34.9%)**
- **Written + verbal (29.1%)**
- **Verbal (19.6%)**

Greatest time of need for DI during the day:

- **8-12 noon (51.6 %)**

Working hours:

- **24◦ (69.9%)**

Open 24 H

Computer Use:

- **55% Use computers.**
- **41.4% Use computer in work**
- **11.6% Use computer to access medline or BBS.**

Effect of age

Drug and Poison Information Network:

- 65.2% In favor.
- 51.7% KSU oriented
- 52% Both gov./priv.
- 39.8% Willing to pay

Future Needs Of Drug Information

Recommendations and Conclusions

- DPICs users are mostly from the hospital pharmacists, KSU graduates and females.
- Checking the drug information is one of the most important steps before distributing those information.
- DPICs are not used to their full potential.

PUBLICITY

- Proper advertisement about DPICs should be made in Newspapers, Newsletters, lectures and symposia, advertisements within the health services and in the schools of pharmacy of Arabic countries other than S.A. and in S.A.

COMMUNITY PHARMACISTS

- Community pharmacists need to be encouraged to call the DPICs.
- Mandatory training for pharmacists, particularly the community pharmacist in DICs.
- DICs will have to provide more drug information services to community practitioners in the future.

•Expose pharmacists who work in the community to DIC to be able to utilize the DPICs to improve their counseling skills and pharmacy profession.

DEVELOPMENTS AND IMPROVEMENTS

- Information processing and the communication techniques.
- DICs will have to be more readily available and accessible to pharmacists and health professionals and should promote their services to both health professionals and to the public.

- The potential for computer technology in improving the efficiency of DI services is great, but drug information pharmacists have not aggressively explored computer applications.

- Our pharmacists need to reconsider reading professional journals emphasizing on our pharmacy students during their undergraduate study that journals are not only meant to be used for the library course only but to make them understand the importance of reading professional journals as part of pharmacy practice.

LICENSURE

A license for all the pharmacists for practicing profession in S.A.

DI NETWORK

- Most of our pharmacists are in favor of creation of a regional drug information network.
- If a regional drug information network is going to be established future needs of our pharmacists concerning the most important DI areas should be taken in consideration.

Thank you