

KNOWLEDGE & ATTITUDE OF TYPE 2 DIABETIS MELLITUS

**In Rural Population Of Alor Gajah
Malacca**

Community Residency Programme (CRP)

MBBS PHASE 3A, SESSION 2004/05, CLASS 2002/07

INTRODUCTION

- WHO: > 15 mil people worldwide. Doubled in 2025¹
- M'sia: 1986 (6.3%) → 1996 (8.2%)²
2000 (942, 000 cases) → 2030 (2479, 000)³
- Alor Gajah: 2000 (3546 cases) → 2003 (4012 cases)⁴
- Indian > Chinese > Malay > aborigines
- Affected by level of social development⁵

OBJECTIVES

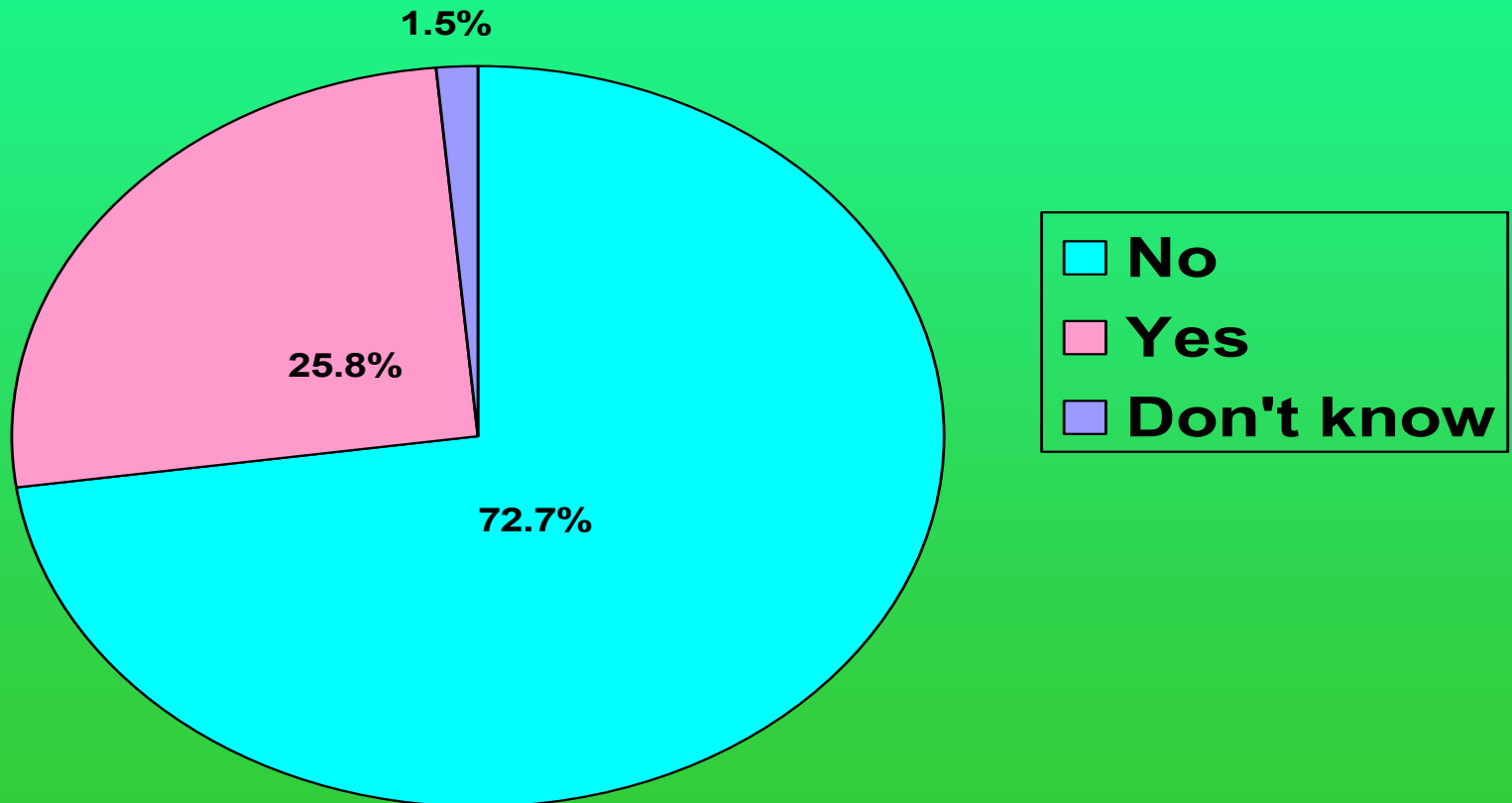
- **To assess knowledge and attitude of Diabetes Mellitus among the rural population in Alor Gajah, Malacca.**
- **To determine the association between**
 - 1. level of education**
 - 2. diabetic status****with knowledge and attitude on Diabetes Mellitus.**

MATERIALS & METHODS

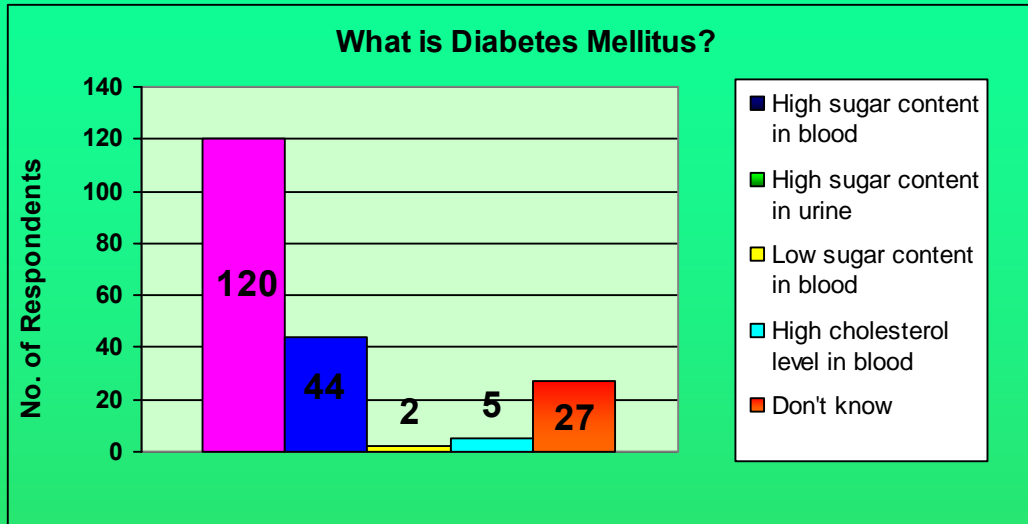
- **Cross-sectional survey of households in four villages in Alor Gajah: 7th - 9th June, 2005**
- **Kampung Kuala Sungai Baru**
- **Kampung Air Limau**
- **Kampung Pinang**
- **Kampung Solok Air Batu**
- **Analysis: 10th – 17th June, 2005.**
- **Pre-tested 23-questions questionnaire with 3 main sections:**
 - **knowledge**
 - **sources of information**
 - **attitude**
- **Random sampling of houses in 4 villages**
- **Head of the household or any other adult representative who is greater than 18 years old**
- **198 subjects were interviewed**
- **Data processing by SPSS version 11.0**
- **Data transformation into reports, power point & posters.**
- **Limitations:**
- **Four villages were not randomly selected**
- **Relatively small sample size in relation to the actual population of Alor Gajah**
- **Only Malay population was included**

FINDINGS & DISCUSSION

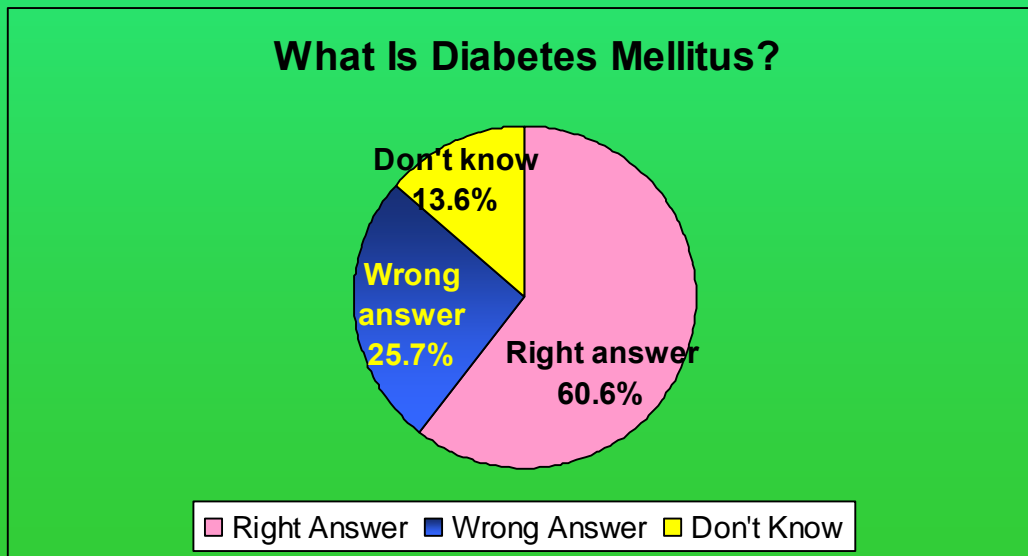
Do you have Diabetes Mellitus?



KNOWLEDGE OF DIABETES MELLITUS

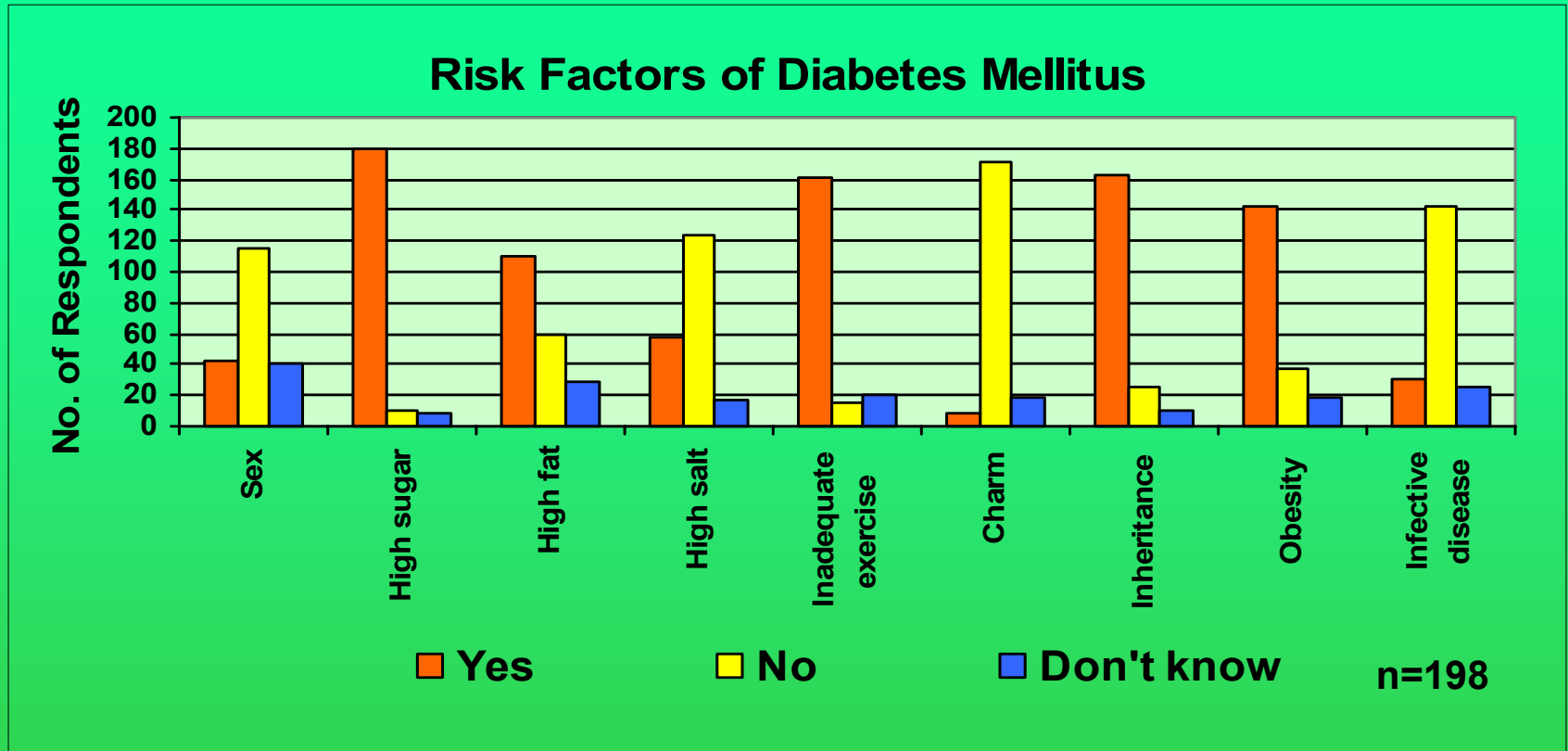


**Common misconception:
high sugar in urine (22.2 %)
or “kencing manis”**



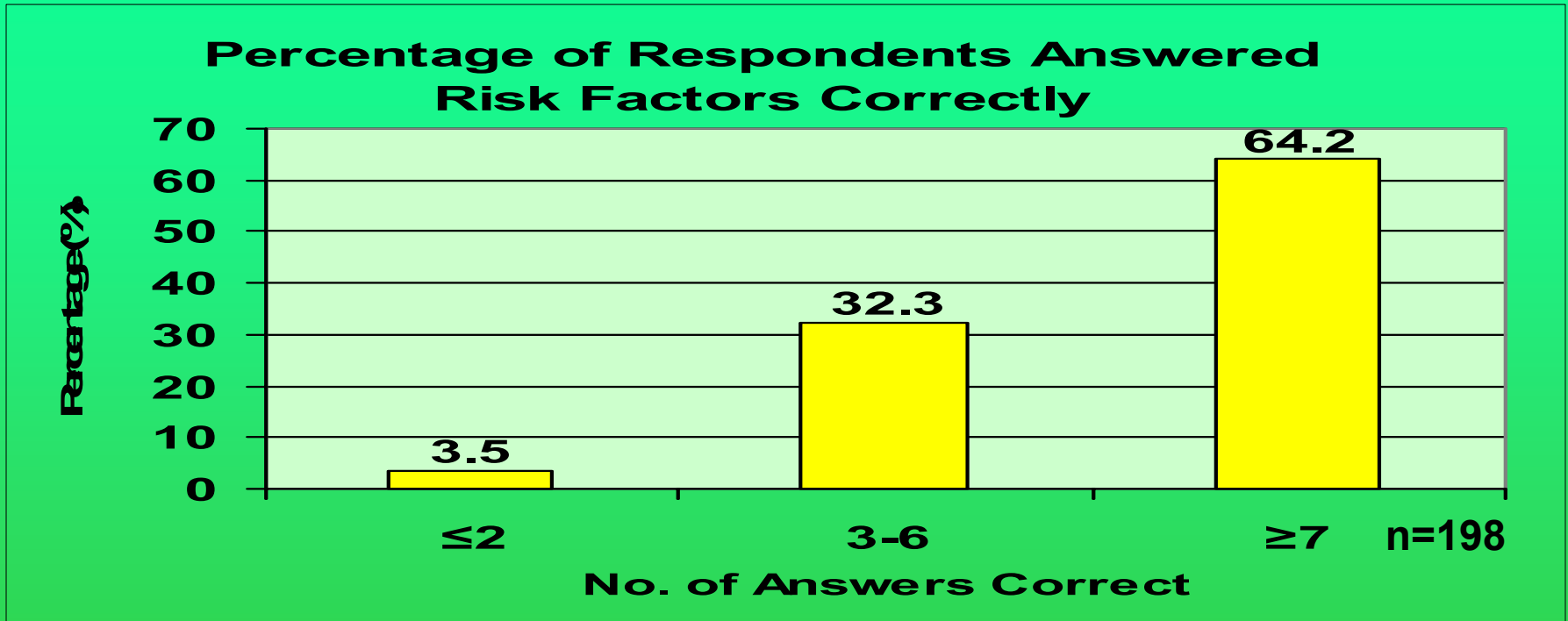
Diabetic status (Diabetic vs non-diabetic)	$p = 0.762$, $df=1$
Educational level (Upper 2° & above vs lower 2° & below)	$p = 0.001$, $df=1$; $OR = 3.106$, 95% CI: (1.600, 6.061)

KNOWLEDGE OF DIABETES MELLITUS



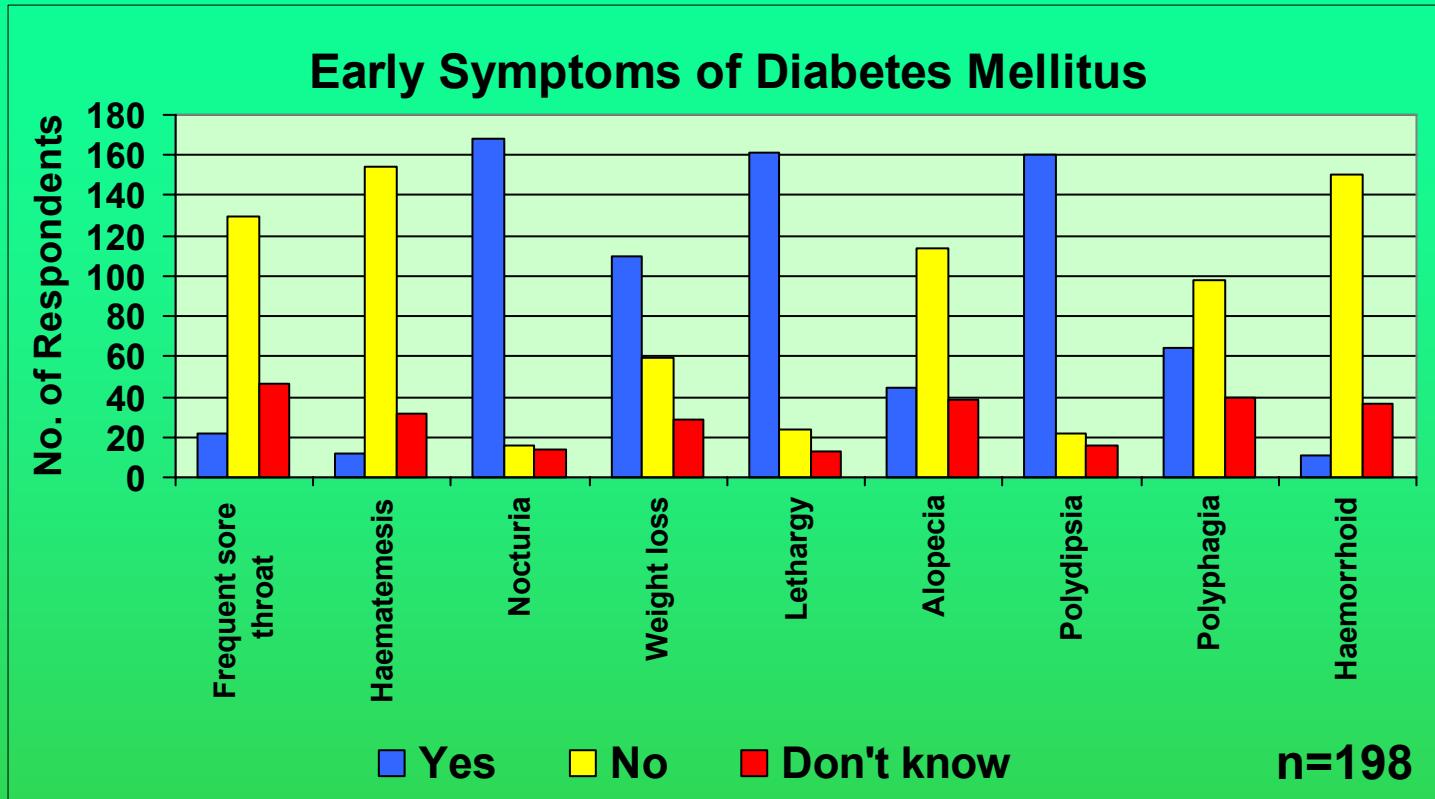
- Well recognized risk factors:
 1. high sugar content food – 90.4%
 2. genetic inheritance – 81.8%
 3. inadequate exercise – 81.3%
 4. obesity – 71.1%
- **56.1%** scored correctly for “high fat intake”

KNOWLEDGE OF DIABETES MELLITUS



- Generally: good understanding.
- Diabetic status
Independent T-Test: p=0.662, df=196
- Level of education
Independent T-Test: p=0.001, df=163.710
- Understanding RF enhances primary prevention

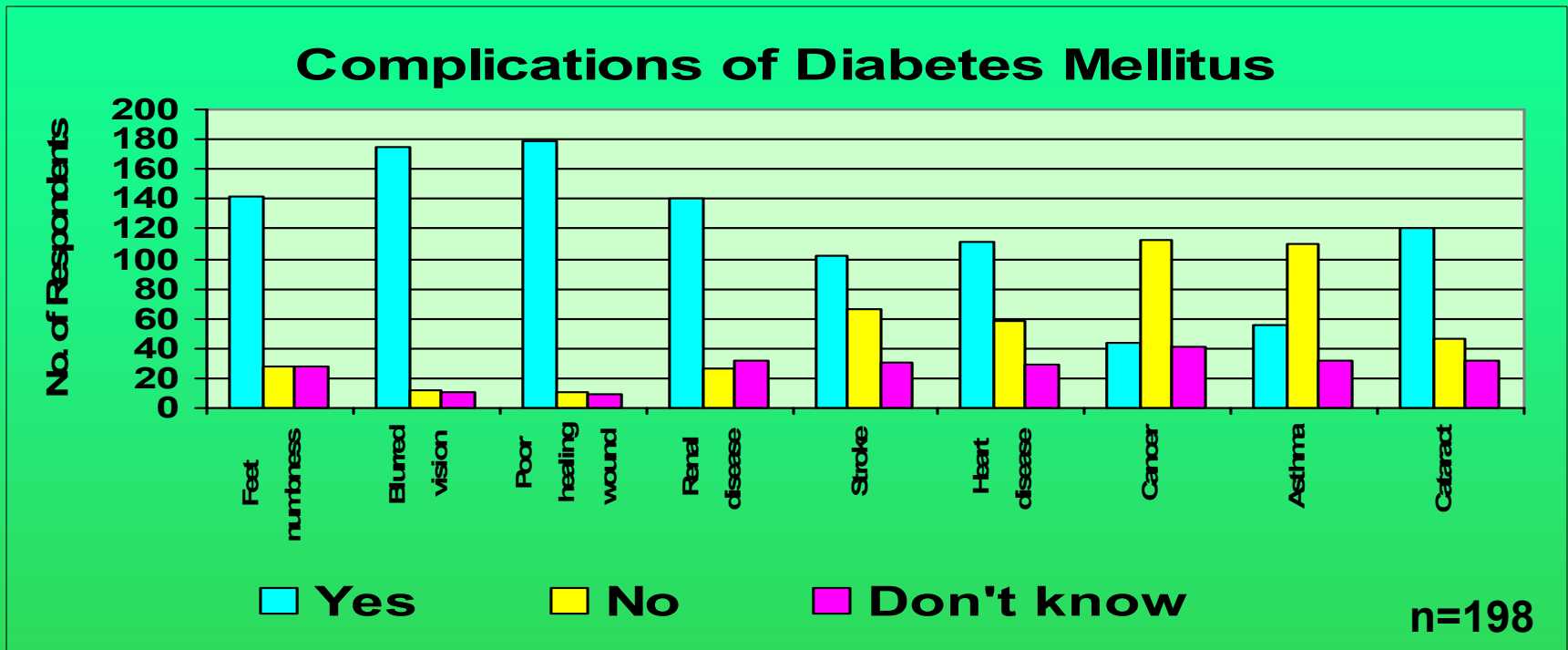
KNOWLEDGE OF DIABETES MELLITUS



- 84.5% - nocturia
- 81.0% - lethargy
- 80.5% - polydipsia

- 50.0% - LOW despite polyphagia
- 29.5% - LOW not associated with DM
- 32.3% - polyphagia
- 47.5% - polyphagia not associated with DM
- 57.5% - no alopecia
- 22.5% - alopecia associated with DM

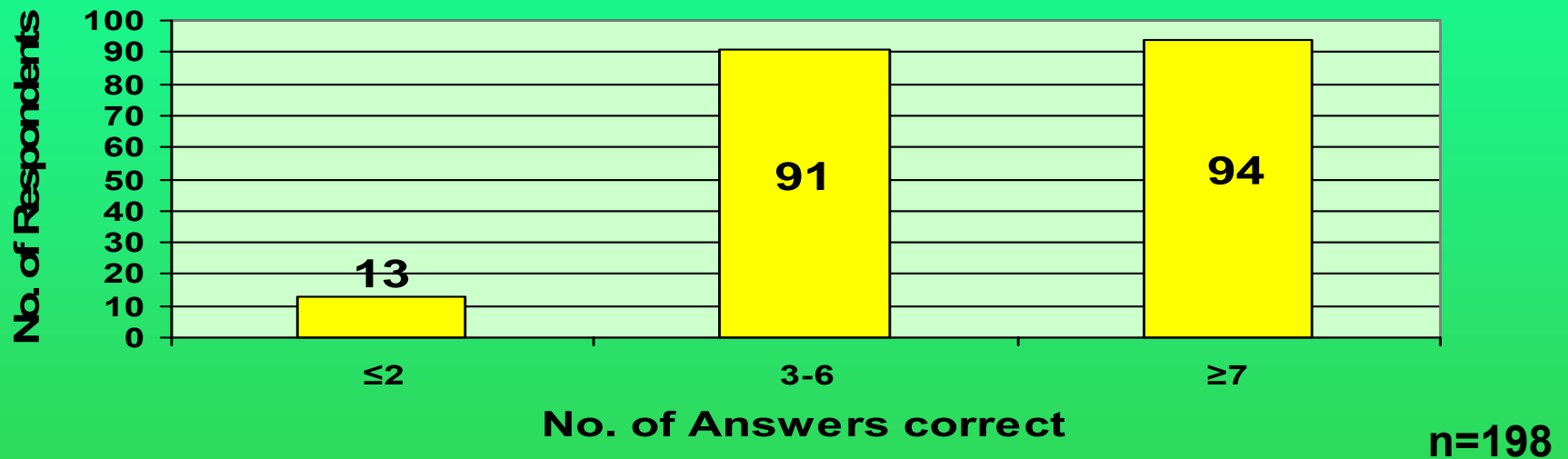
KNOWLEDGE OF DIABETES MELLITUS



- > 70% : *loss of sensation in legs* *blurred vision*
 poor wound healing *renal diseases*
- 60.6% : cataracts
 ** elderly people developed cataract w/o DM
- 51.5% & 56.1% know CVA and CVD complicate DM
 ** co-morbidities eg HPT & hypercholesterolaemia
- 57.1% & 55.6% : no relationship between CA & asthma with DM

KNOWLEDGE OF DIABETES MELLITUS

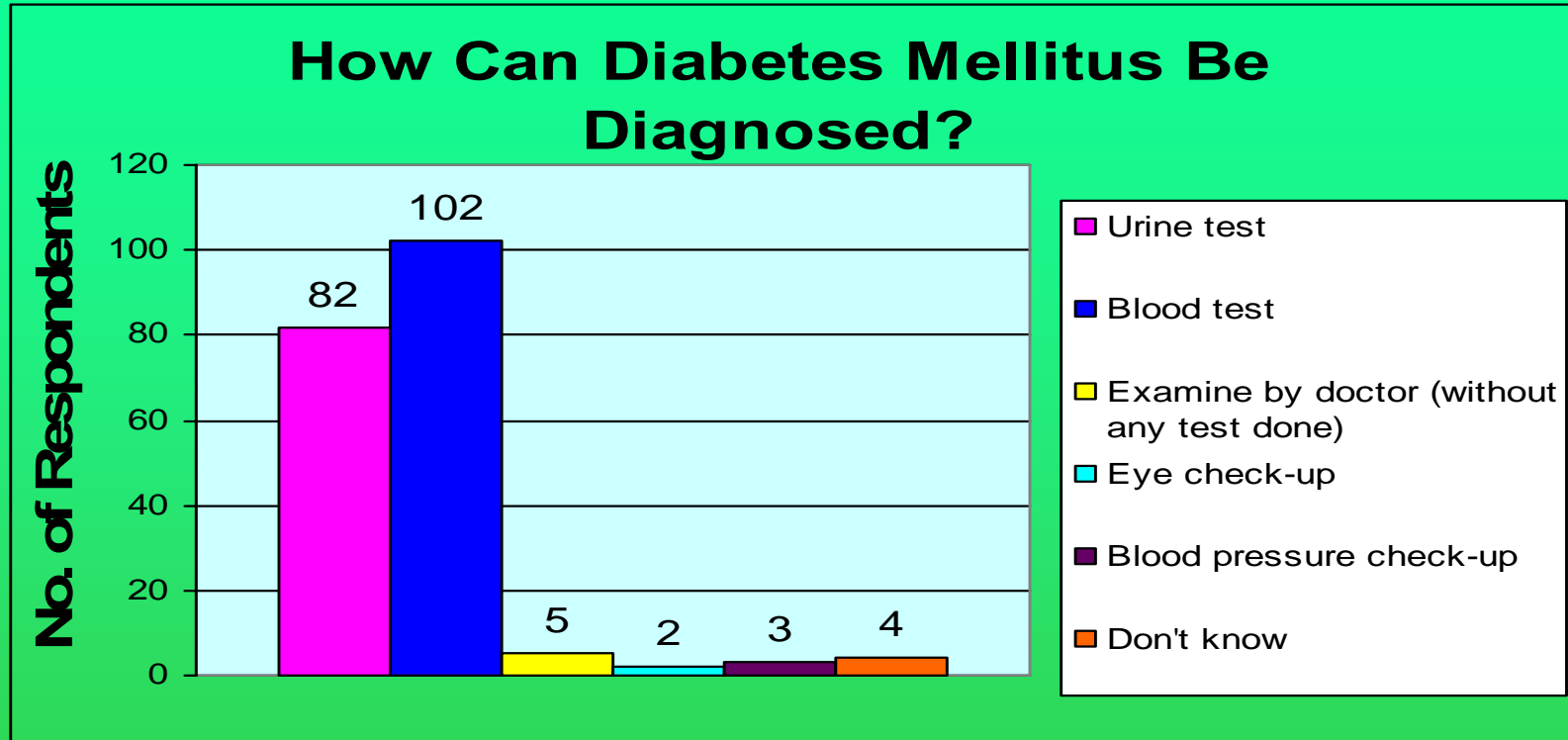
Number of Respondents Answered Complications Correctly



- Generally, adequate knowledge of complications
- Mean for correct answers is 6.02 out of 9
-- 66.9% comparable to score obtained in S'pore study (66.7%)

Diabetic status	$p=0.003$, $df=196$
Education level	$p=0.049$, $df=160.510$

KNOWLEDGE OF DIABETES MELLITUS



n=198

51.1% - blood test (RBS / FBS)

41.0% - urine test (not sensitive)

knowledge on diagnostic test is not satisfactory as only ~ half scored correctly.

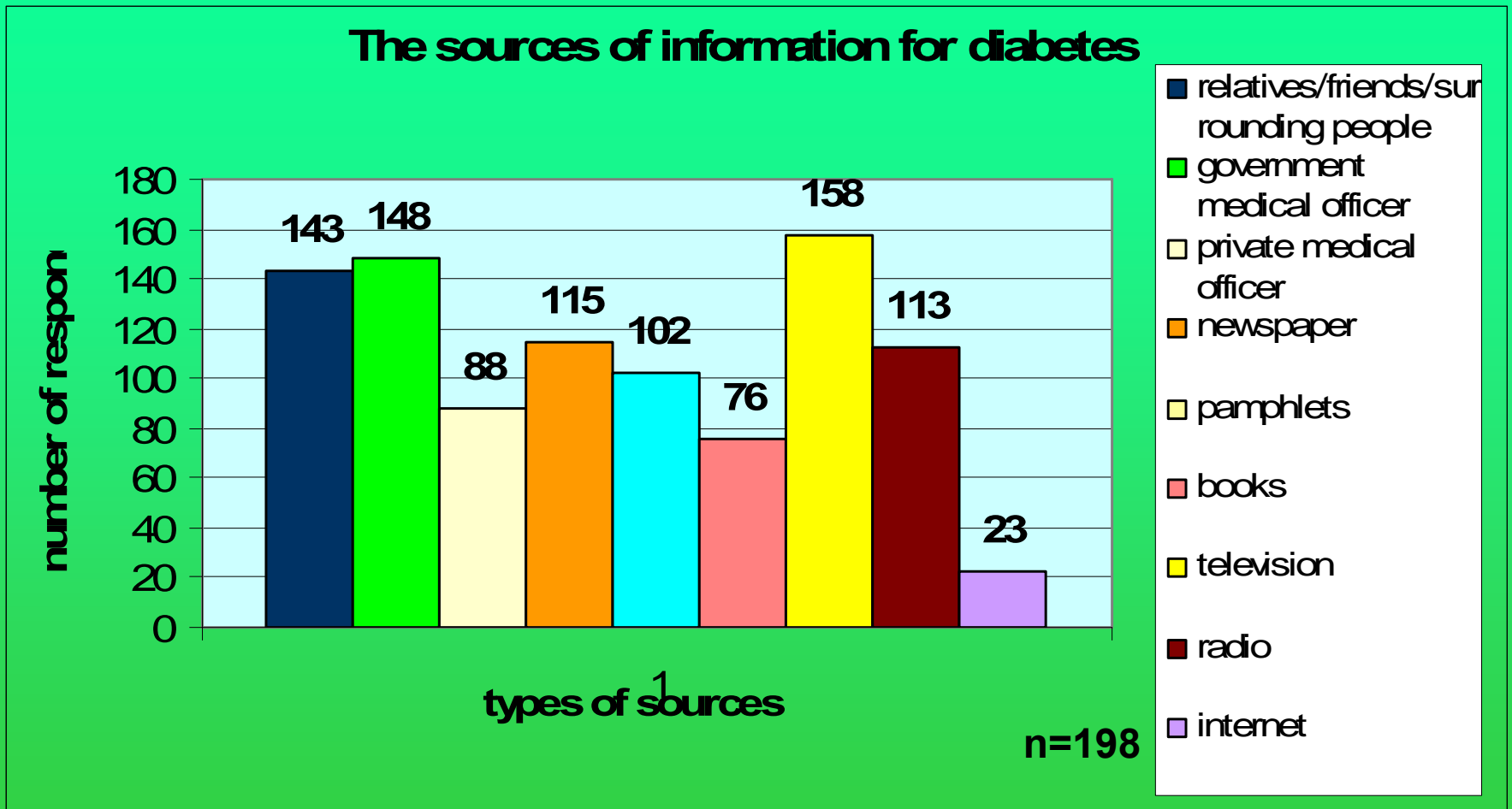
Diabetic status	$p < 0.001$, $df = 1$ OR = 3.334 95% CI: (1.663, 6.686)
Education level	$p = 0.763$, $df = 1$

KNOWLEDGE OF DIABETES MELLITUS

Most effective	Moderately effective	Less effective	Frequency
Medication	Exercise	Diet control	13
Medication	Diet control	Exercise	34
Exercise	Medication	Diet control	5
Exercise	Diet control	Medication	11
Diet control	Medication	Exercise	55
Diet control	Exercise	Medication	80

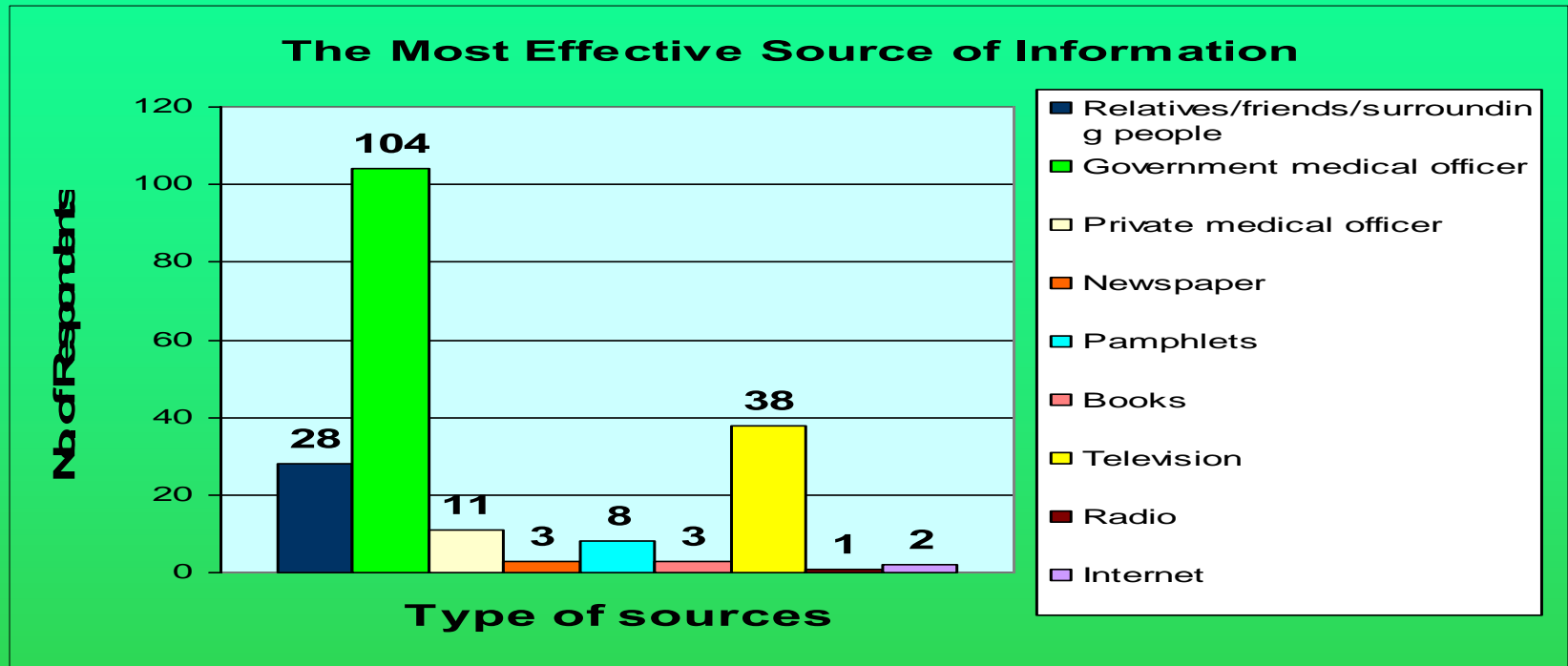
- Correct knowledge on DM control
 - diet control – 68.1%
 - exercise – 8.1%
 - medication – 23.8%
- Unclear if know the proper method of diet control
- Important education & role of dietitian

SOURCES OF INFORMATION



- 79.8% -- TV
- 74.7% -- governmental health personnel
- 72.2 % -- relatives / friends/ people around

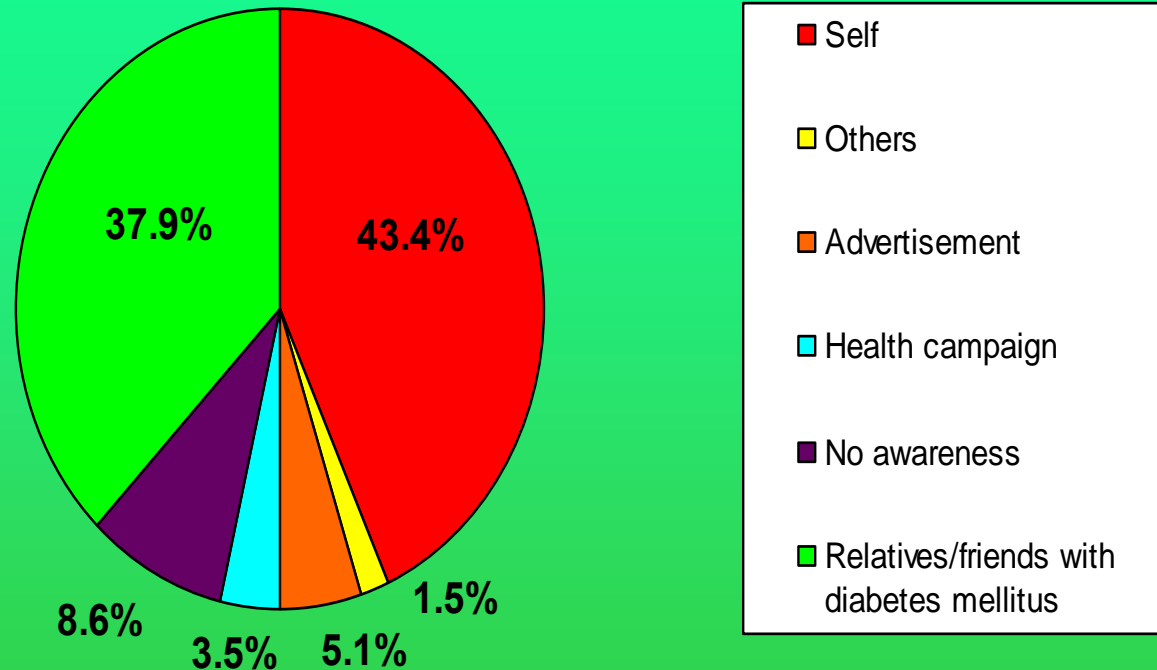
SOURCES OF INFORMATION



- 52.5% -- govt. health personnels
 - Reasons: 50% - trustability of the professional advice*
 - 38.5% - easy to understand*
- Modern medicine has increased influence & its credibility is not in doubt
- Villagers are comfortable with government doctors.

ATTITUDE OF DIABETES MELLITUS

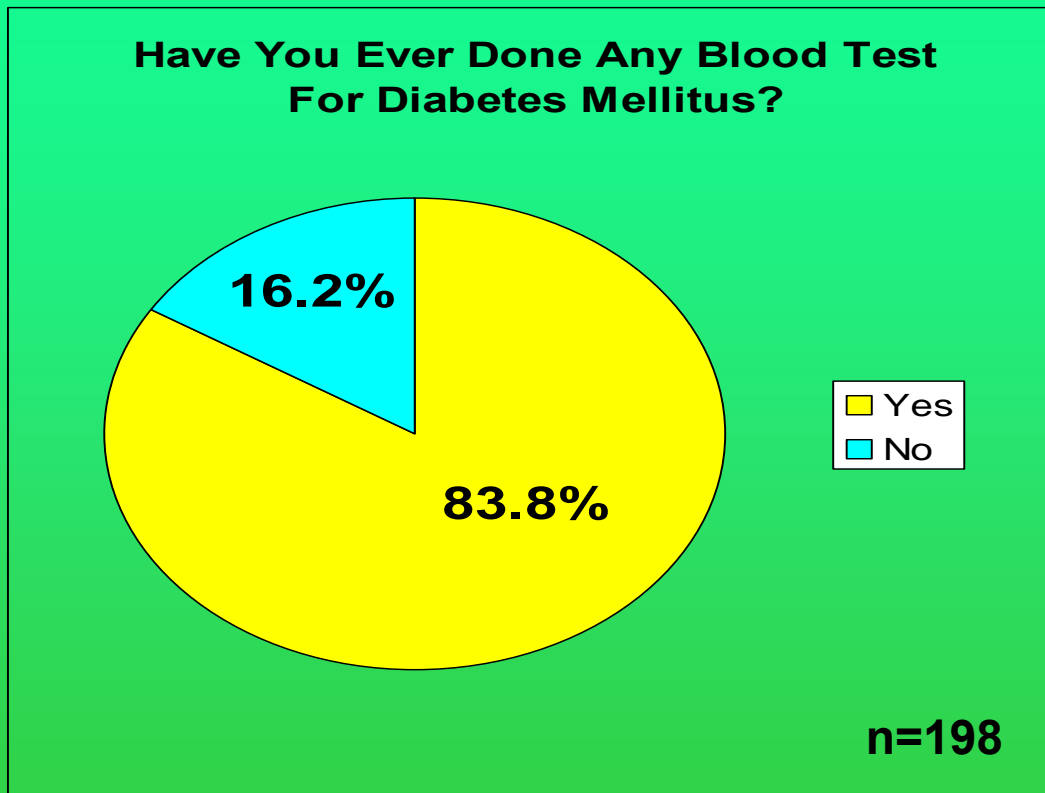
Source of Awareness of Diabetes Mellitus



n=198

- 43.4% - own initiative
- 37.9% - real experience of seeing diabetic complications
- 3.50% - health campaigns
- 5.10% - advertisements
- 8.60% - not aware of DM

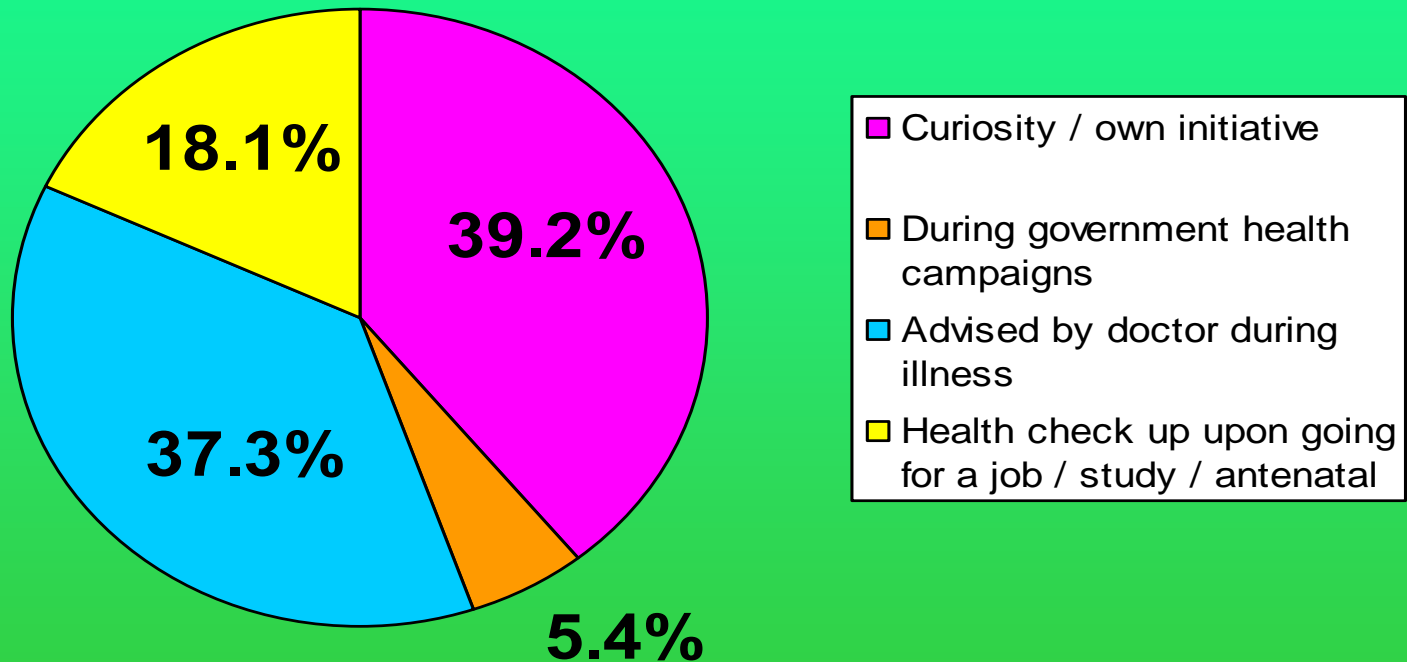
ATTITUDE OF DIABETES MELLITUS



Diabetic status	<ul style="list-style-type: none">• $p < 0.001$,• $df = 1$• $OR = 1.278$• $95\% CI = (1.174, 1.392)$
Education level	<ul style="list-style-type: none">• $p = 0.003$• $df = 1$• $OR = 3.161$ (lower vs. upper)• $95\% CI = (1.456, 6.860)$

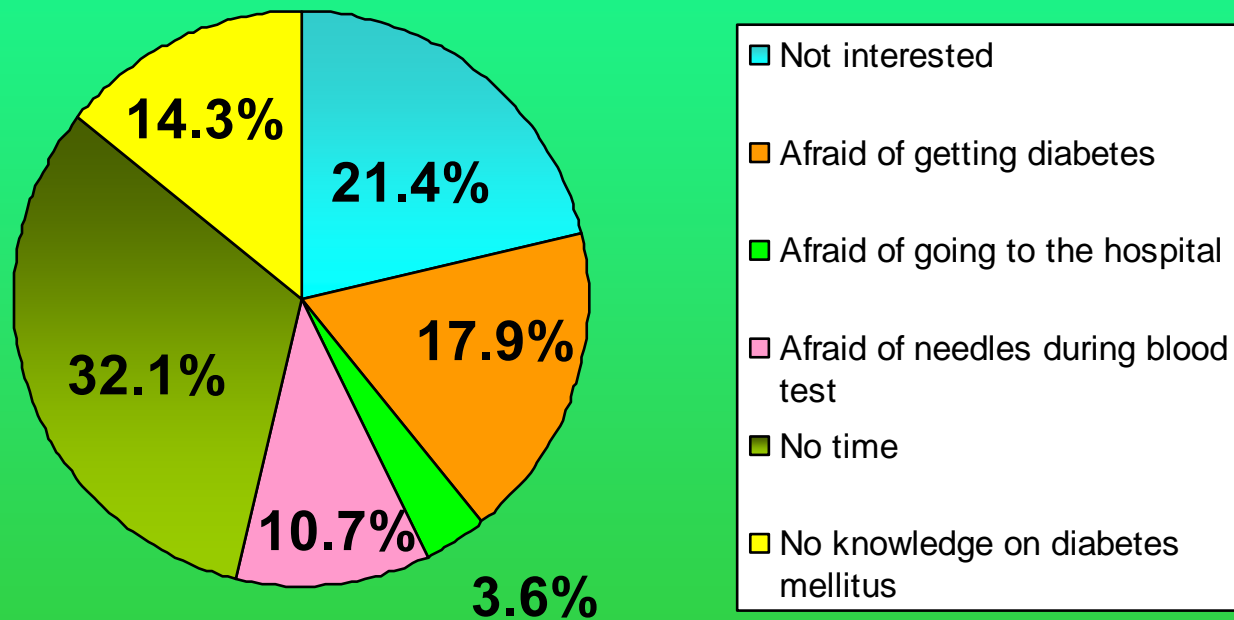
ATTITUDE OF DIABETES MELLITUS

Reason For Doing A Blood Test

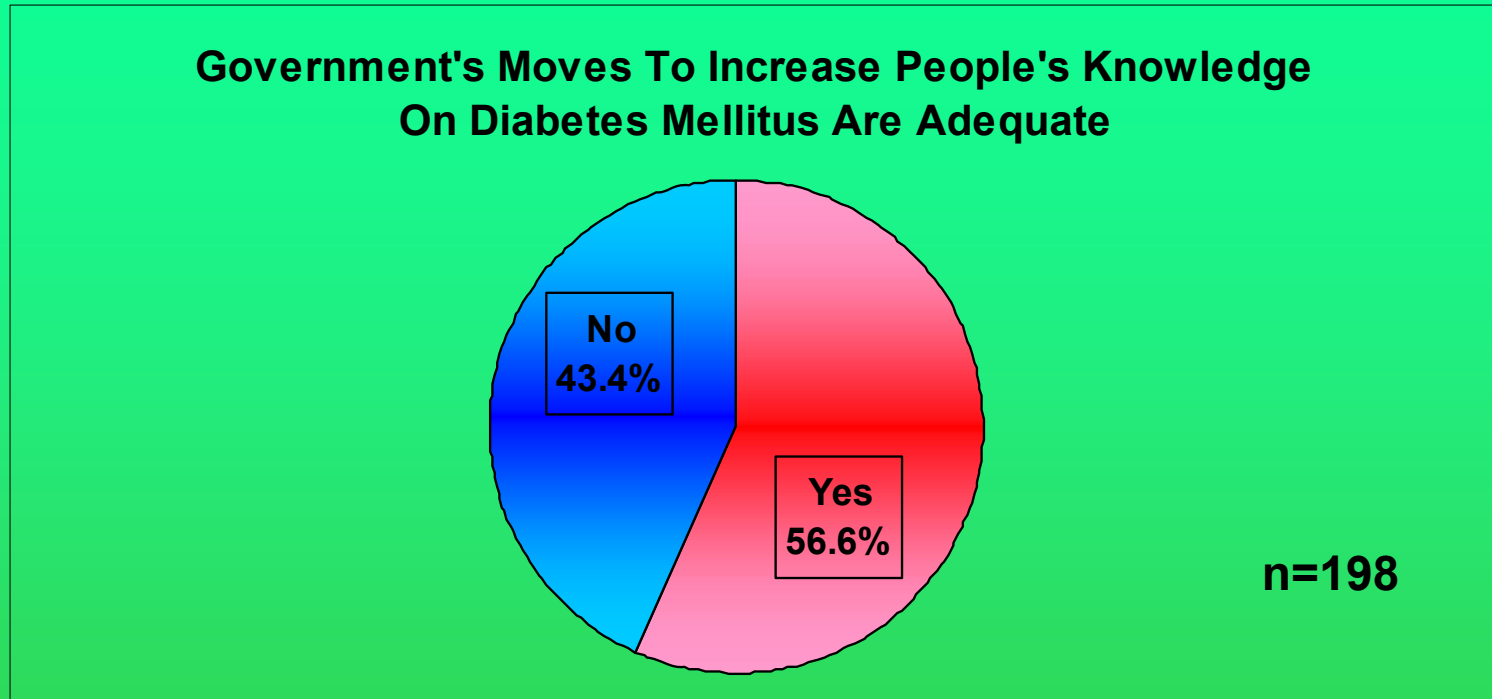


ATTITUDE OF DIABETES MELLITUS

Reason For Not Doing A Blood Test For Diabetes



ATTITUDE OF DIABETES MELLITUS



56.6% - yes

- up to individuals to exploit the various available sources

43.4% - no

- information does not reach them

Diabetic status	$p=0.301$ $df=1$
Education level	$p=0.026$, $df=1$ $OR=1.968$ $95\% CI=(1.081, 3.581)$

CONCLUSION

- generally well informed
- *Upper secondary & higher educated vs.. lower secondary & below:*
 - better knowledge in risk factors
 - better attitude in diet control awareness
 - more likely to feel inadequacy in government's move
- *Diabetics vs.. non-diabetics:*
 - better knowledge in symptoms, complications, diagnosis
 - better attitude in diet control awareness
- Most effective source of information: government healthcare personnel
- An improved educational program on Diabetes Mellitus in future is anticipated.
- Private sectors (TV, doctors, pharmacists) are encouraged to participate.

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