



Prevalence and determinants of overweight and obesity among pregnant women attending the Colonial War Memorial Hospital (CWMH) Antenatal Clinic, Suva, Fiji Islands, 2015

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PSRH Conference Vanuatu 2017*

Background

Overweight and obesity, as excess body fat accumulation in adipose tissue, and typically estimated by calculating an individual's body mass index (BMI) score (*Grundy, 2004*) has become recognized as **a global pandemic**.

It was estimated in 2005 that 937 million were overweight and 396 million were obese and it was estimated that **it will keep on increasing** to 2.16 billion and 1.12 billion respectively by 2030 (*Kelly et al., 2008*).

The World Health Organization (WHO) recognizes obesity as **a global health issue** with one billion adults worldwide identified as overweight and an additional 300 million obese (WHO, 2000).

In 2002, it is estimated that approximately 39% of all treatment costs as well as 82% of all deaths were related to **diet-related non-communicable diseases (NCDs)** (*Szmedra and Sharma, 2007*).

South Pacific countries have **the highest** rates of obesity around the world (*Teevale et al., 2010*).

In New Zealand, for instance, it is estimated that around two thirds of Pacific adults and one third of Pacific children have an **almost three-fold higher risk of being obese** compared to the general population (26.5% for adults; 8.3% for children) (*Gerritsen et al., 2008*).

In Fiji, epidemiological survey data suggest that the prevalence of overweight has **increased in children** between 1993 and 2004 (*Horikawa et al., 2011*).

Approximately **75%** of the population in many of Pacific countries including Nauru, Samoa, American Samoa, Cook Islands, Tonga and French Polynesia are now experiencing **adult overweight and obesity** (*WHO, 2000*)

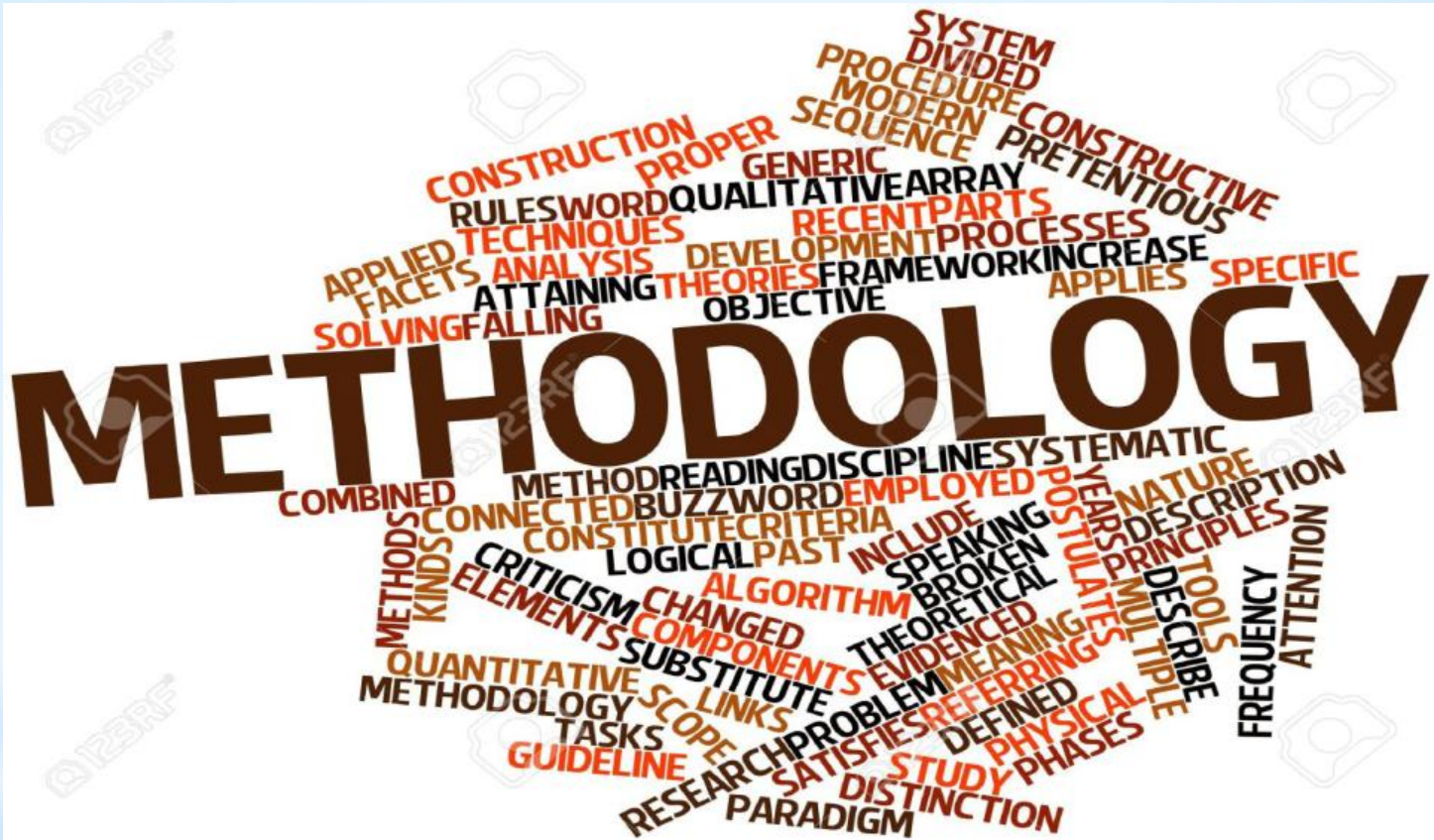
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Aim of the Study

To determine **the prevalence of overweight and obesity among pregnant women** attending antenatal clinic at the Colonial War Memorial Hospital (CWMH), Suva, Fiji Islands (*May 2014 – December 2015*).

Objectives of the Study

- 1- Determine sociodemographic profile and reproductive characteristics of these pregnant women.
- 2- Determine the prevalence of overweight and obesity among these pregnant women.
- 3- Determine predictors of overweight and obesity among these pregnant women.



Study design

This was a descriptive, cross-sectional study conducted between 1st May 2014 and 31st December 2015.

Inclusion and exclusion criteria:

- All Fijian pregnant mothers attending the Antenatal Clinic for their first booking visit at the Colonial War Memorial Hospital (CWMH) Antenatal Clinic in Suva, were included in this study.
- Those who came for the return visit (second visit) were excluded.

Sampling and sample size:

A purposive sampling was used.

2203 mothers who met the inclusion criteria participated in this study.

BMI measurement:

WHO scale to categorize participants Body Mass Index (BMI).

- ❑ less than 18.5 (underweight);
- ❑ 18.5 to 24.9-(normal weight);
- ❑ 25 to 29.9 (overweight) and
- ❑ 30 and over (obese) (Flegal et al., 2005).

Data analysis:

All the data were analyzed using SPSS (version 22)

For continuous variables t-tests were applied

For the categorical variables a Chi –square test was used.

A correlation test was applied

Statistical significance was declared when $P < 0.05$.

Ethical considerations:

The data were de-identified and confidentiality was maintained at all times.

This study was approved the Ethics Committee of the Fiji National University and the Fiji National Ethics and Research Committee.

RESULT
STUDY

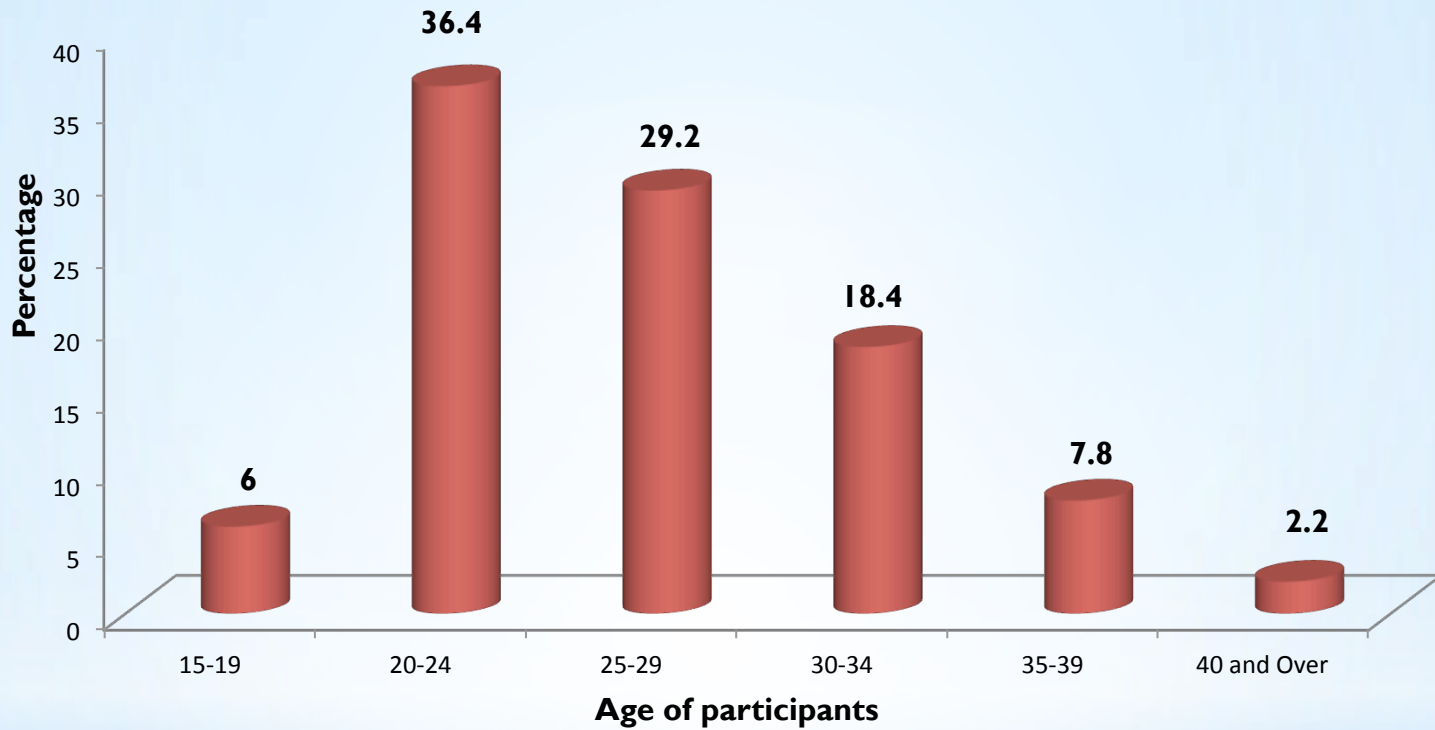


Figure I: Frequency of participants based on age groups

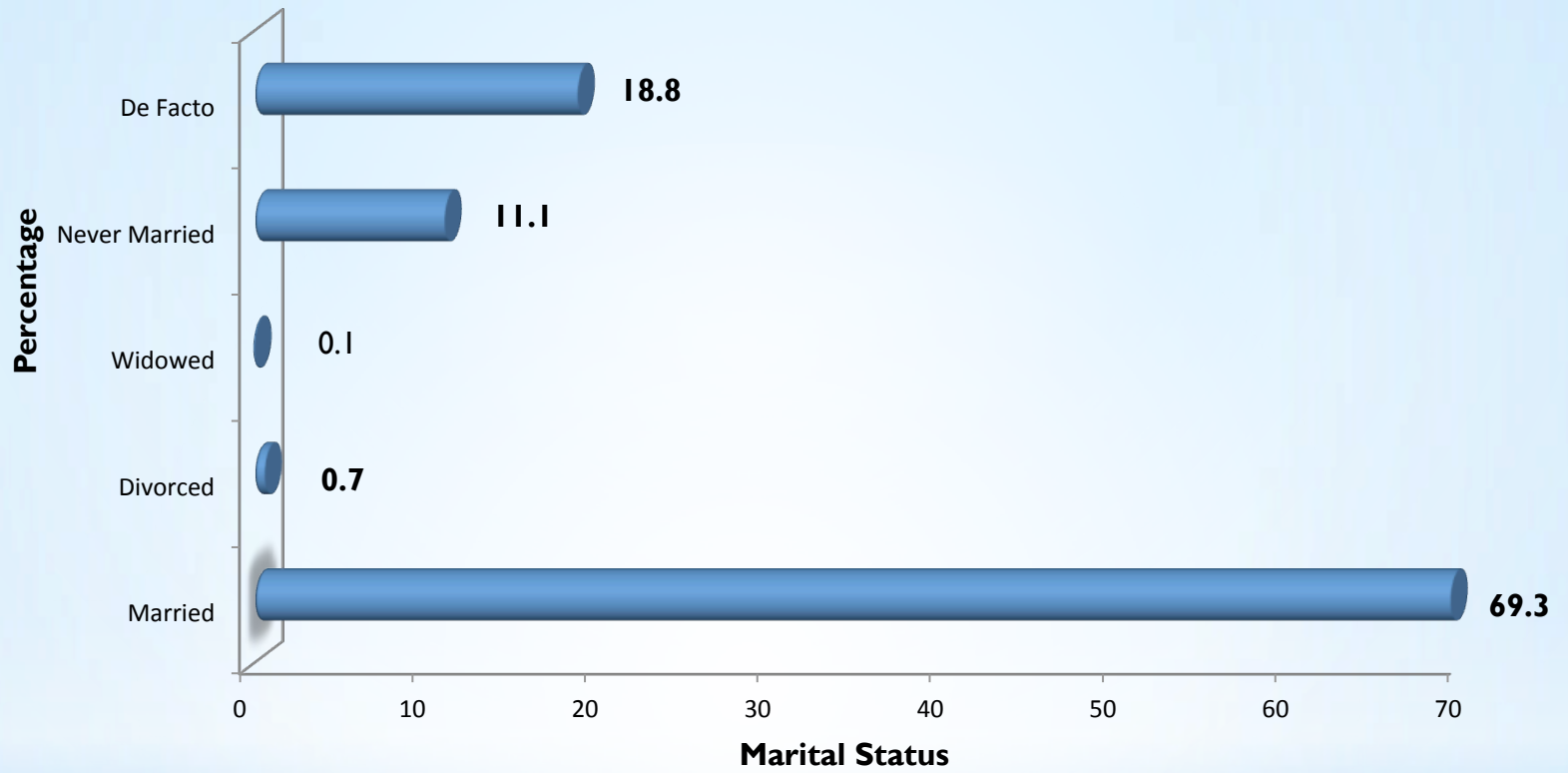


Figure 2: Frequency of participants based on Marital Status

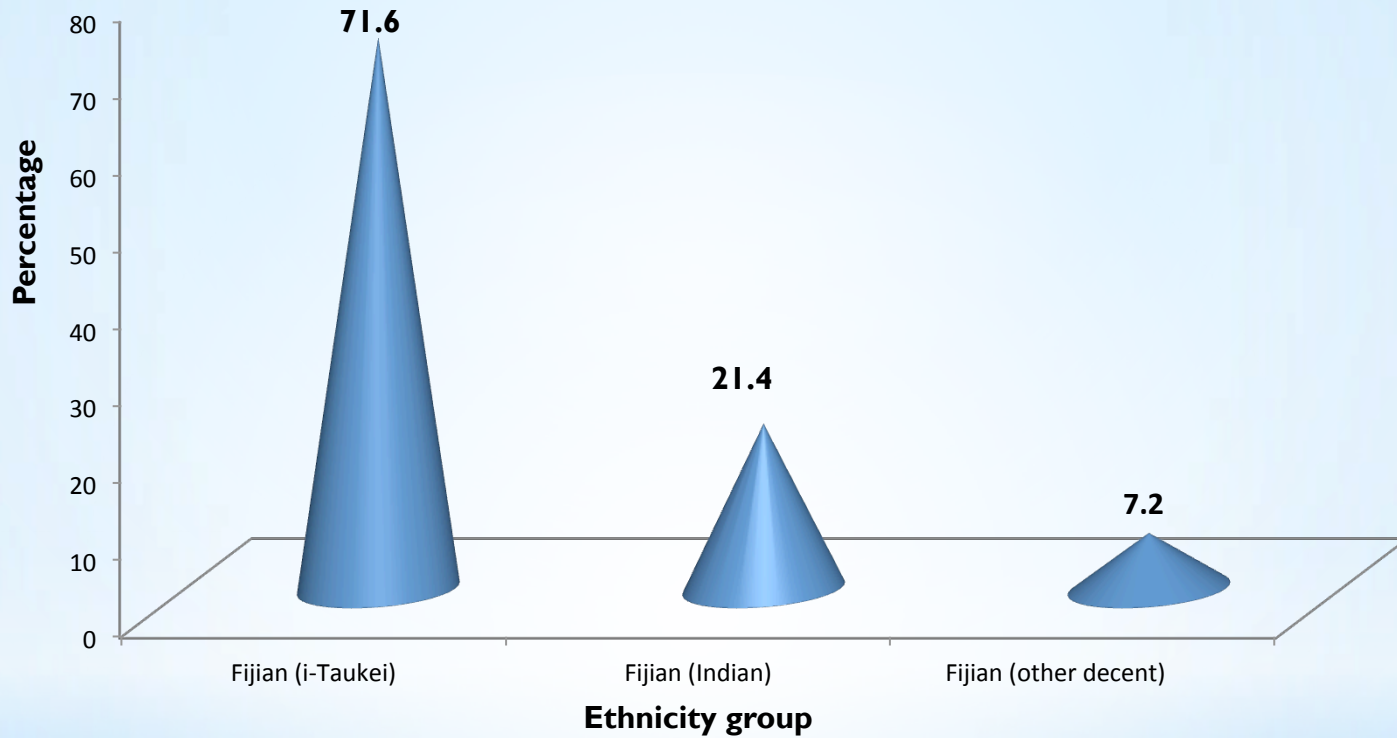


Figure 3: Frequency of participants based on Ethnicity group

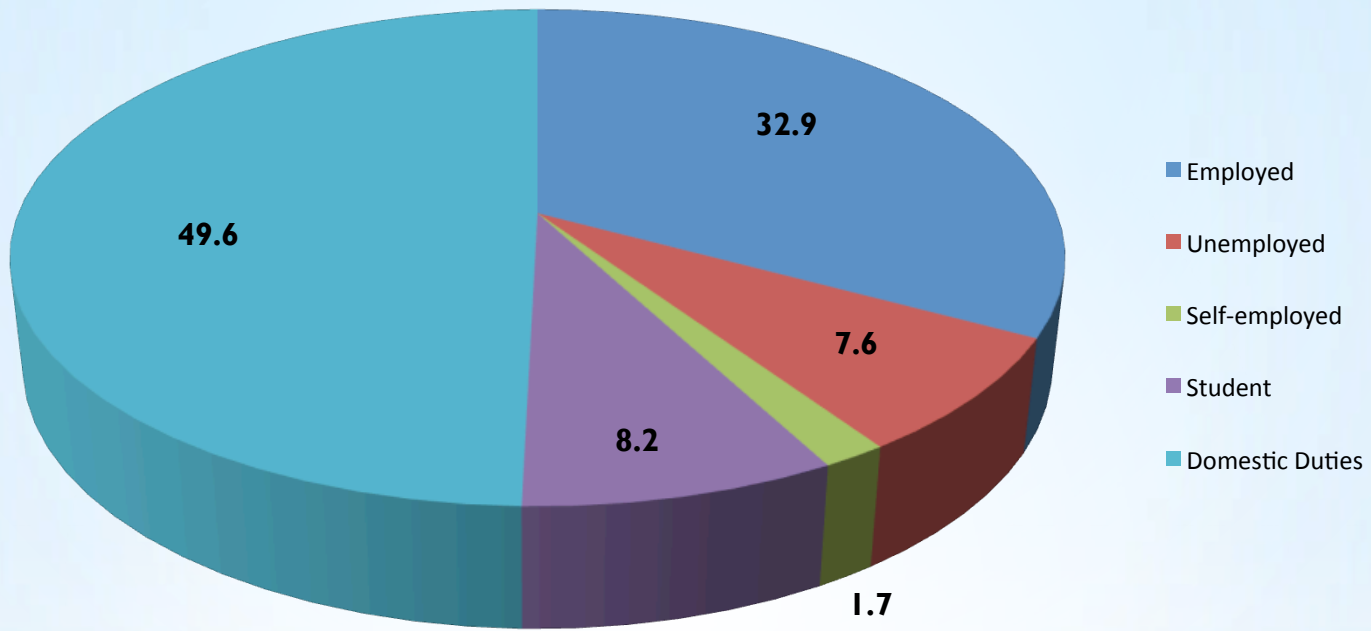


Figure 4: Frequency of participants based on Employment status

Table I: Reproduction characteristics of participants

Factor	Frequency	Percentage
Age of first sexual intercourse		
Under 15	13	0.6
15-19	796	39.5
20-24	1022	50.7
25-29	173	8.6
30 and Over	13	0.6
Previous pregnancy		
Yes	1352	65
No	729	35
Number of live children		
0	29	2.24
1-2	835	64.5
3-4	324	25.1
5 and over	88	6.8

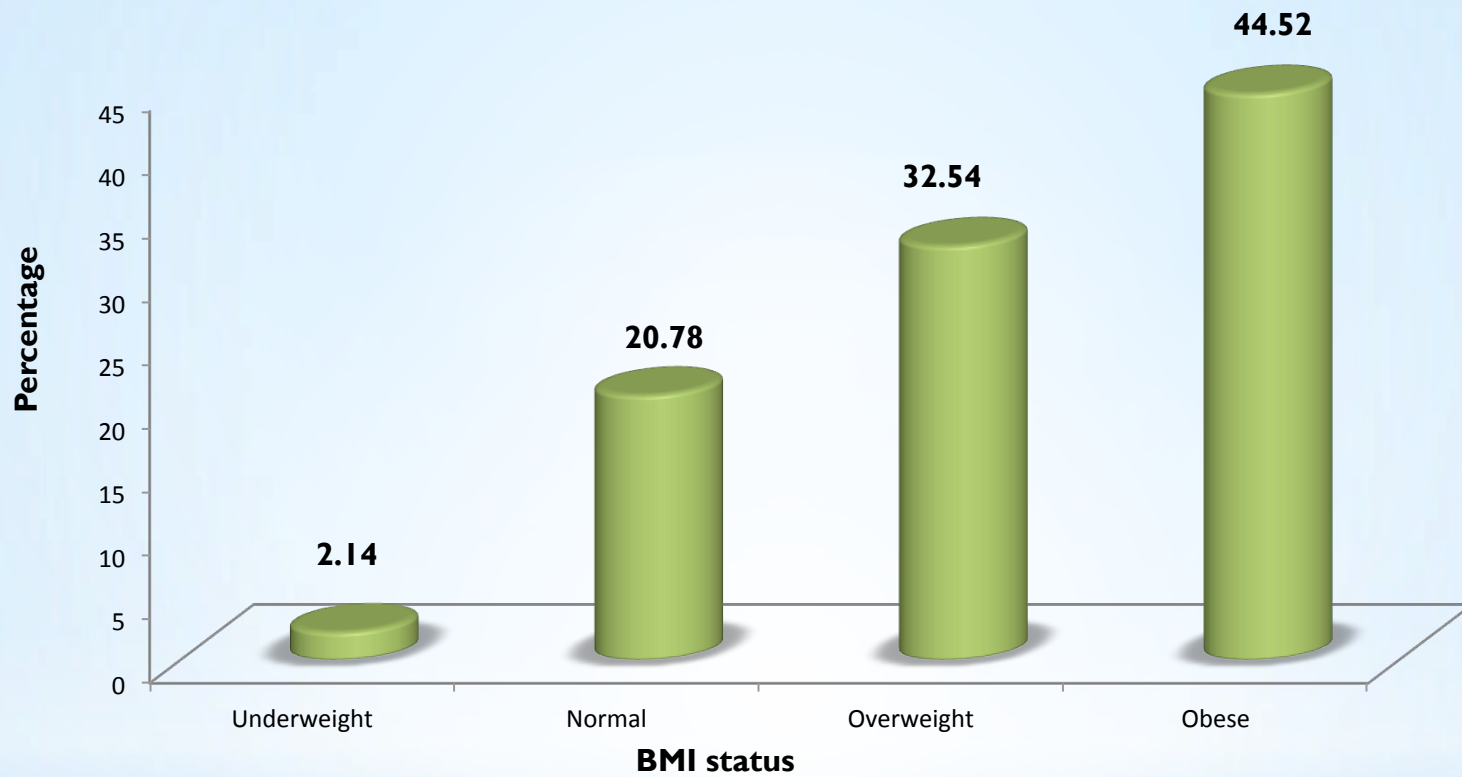


Figure 5: Frequency of participants based on BMI status

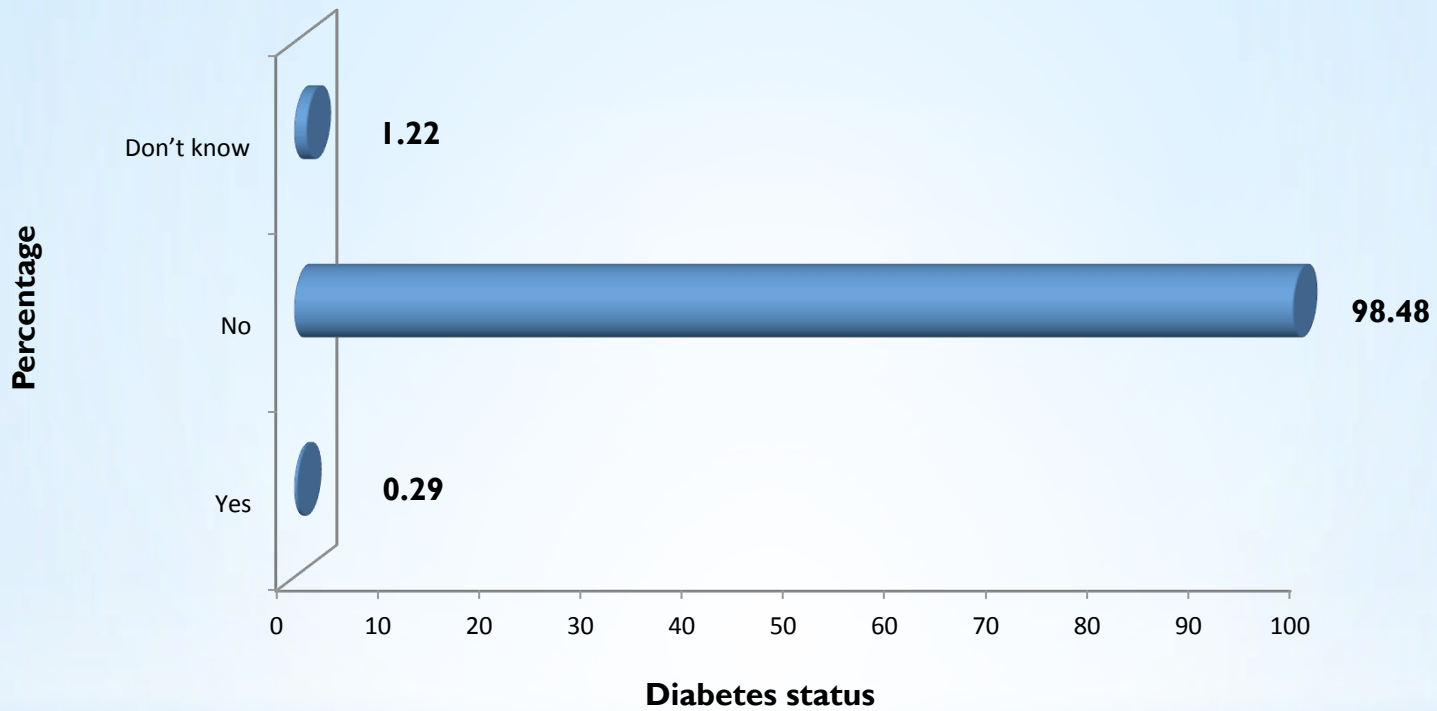


Figure 6: Frequency of participants response based on Diabetes status

Table 2: Frequency of BMI in different Ethnic groups

Ethnic groups	BMI status				Row Total
	Underweight	Normal	Overweight	Obese	
i-Taukei	10 (0.7%)	234 (16.7%)	471 (33.7%)	682 (48.8%)	1397
Fijian (Indian Descent)	32 (7.5%)	158 (36.9%)	127 (29.7%)	111 (25.9%)	428
Fijian (Other Descent)	0 (0.0%)	3 (6.4%)	10 (21.3%)	34 (72.3%)	47

The result of correlation test showed that participants' age ($r=0.24$, $p=0.001$) was correlated with participants BMI status.

Those who were older had more chance to be overweight and obese.



DISCUSSION

Key Messages

Promoting healthy lifestyles which prevents overweight and obesity needs to be developed through **primary prevention programs** to reduce key risk factors before chronic disease rates reach overwhelming levels.

It is essential to educate people and **increase their knowledge** about healthy food consumption.

A broad strategy, including **modifying human behavior**, improving the health system, educating the **stake holders** and changing the laws and regulations so that everyone is more capable of taking action and improving the well-being of Pacific Islanders and their future.

Medical and health practitioners might be more involved in health promotion. Also, the **community**, and **government** health policy creators and mass media could become more involved in health promotion by developing suitable legislation and educational programs and appropriate communicative messages correspondingly to different societies.



Any Questions

