

ARTIFICIAL SWEETENERS: PREVALENCE & KNOWLEDGE IN THE UAE

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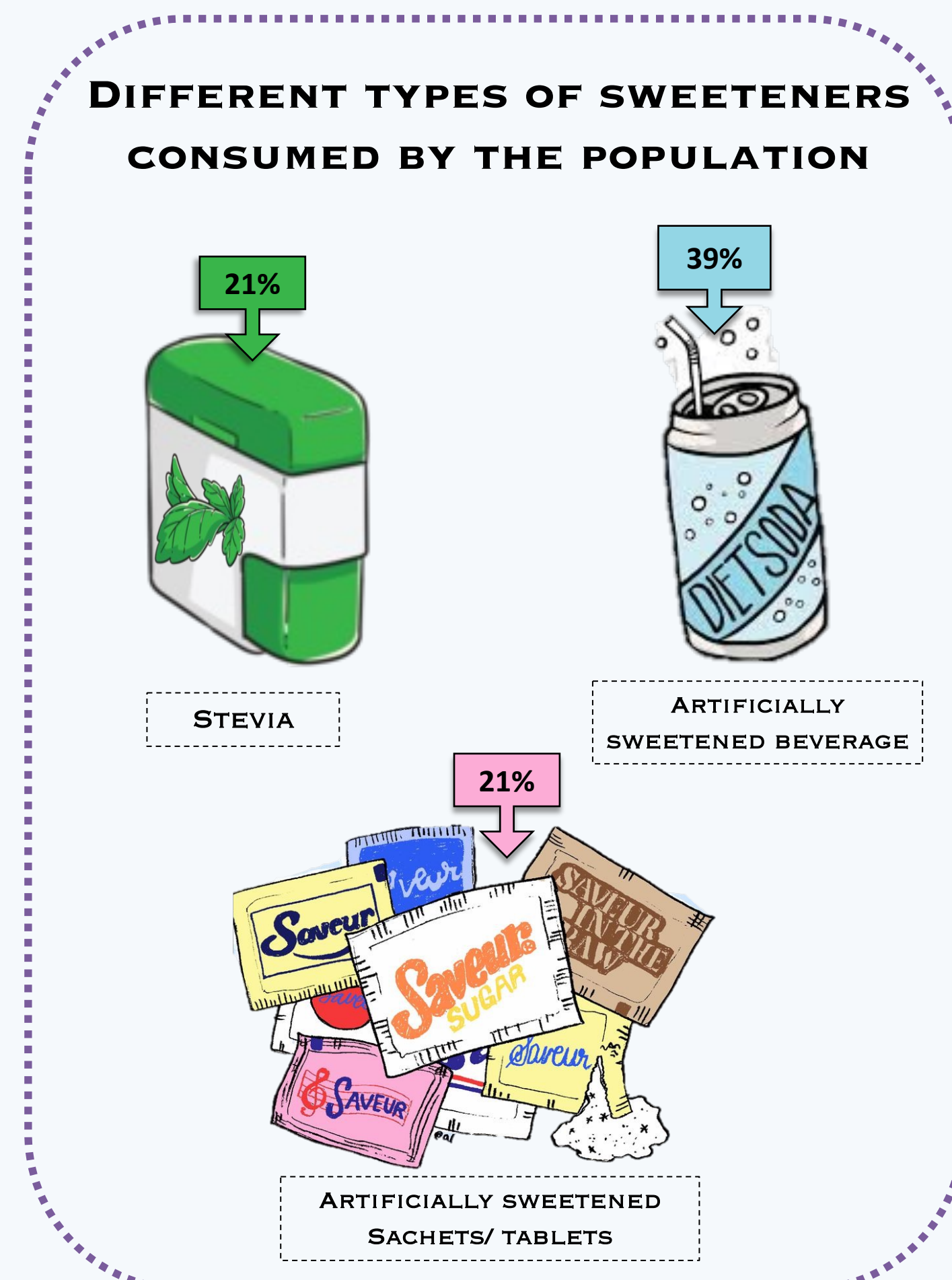
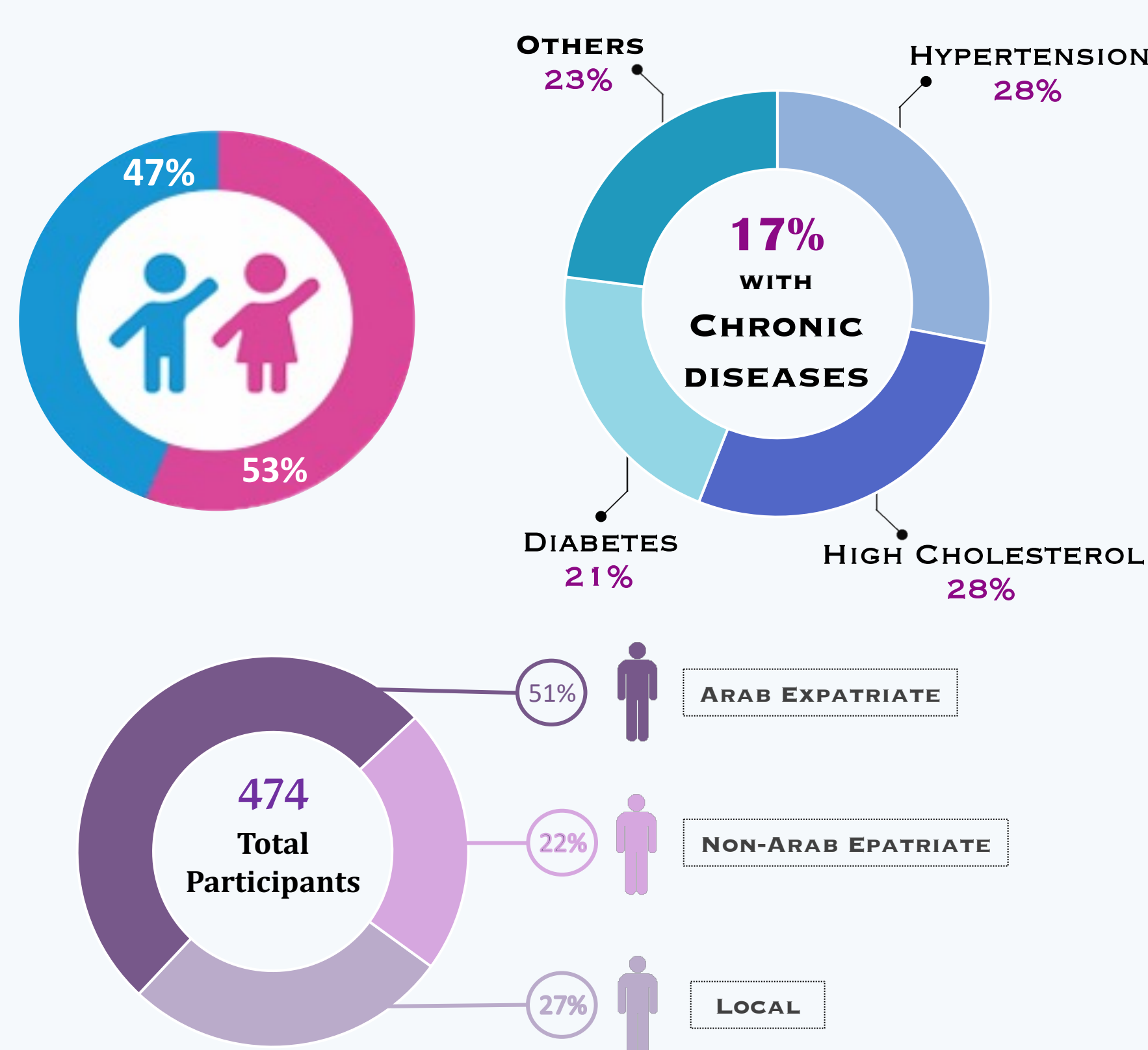
Introduction

- In the past few decades, we have seen a steep rise in diabetes and obesity all around the world. Lifestyle changes, excessive calorie intake, decreased physical activity and many more factors have contributed to this drastic turn. (Mejía et al., 2006)
- To slowly tackle this situation many people began to switch to using artificial sweeteners (AS), as they allow the consumer to maintain their desired palate without worrying about caloric intake. (Mejía et al., 2006)
- With increase in independent research on AS, studies have linked consumption of AS with multiple problems like metabolic syndrome, interference with gut microbiota and with the way our bodies respond to intake of sugary substances. (Swithers, 2013)

Aim
As not many studies have been done in the middle east on AS, this study aims to find out the prevalence of artificial sweeteners' consumption in the United Arab Emirates and to describe the general population's knowledge about them.

Results

Demographics



Significant findings included consumption of:

- Stevia: females > males by 22.1% (P-value < 0.001)
 - Stevia: Arabs > Non-Arabs by 19% (P-value = 0.041)
 - Artificial sweeteners: Arabs > Non-Arabs by 12.7% (P-value = 0.023)
 - Artificially sweetened beverages: Non-Arabs > Arabs by 12.5% (P-value = 0.055)*
- *Borderline significance

No apparent correlation was found between long-term diseases and the consumption of AS, diabetes in specific.

Knowledge

- Assessed using a set of 14 questions.
- Correlation between Knowledge score and:
 - Exercise: strongly associated (P-value < 0.0005)
 - BMI: No relationship found
 - Educational level: No relationship found
 - Having Diabetes Mellitus: No relationship found
 - Age: relationship found*

*People ≤ 25 years old are more knowledgeable about AS than those who are >25 years old with borderline significance (P-value= 0.077).

Methodology

Design

- Descriptive, cross-sectional study.

Sample

- A total of 474 male and female UAE residents between 18 and 69 years old were selected to participate in this study by convenience sampling in multiple public places.
- Minimum sample size of 385 was determined based on a marginal error of 5% and an assumed prevalence of 50% due to lack of actual population proportions.

Instrument

- A self-administered, structured questionnaire was made consisting of 37 questions divided into 5 sections: demographics (7), health-related (4), practices (10), attitudes (2) and knowledge (14).

Analysis

- SPSS 26 was used to analyze data and calculate percentages and means. Various tests (Chi-Square, Mann-Whitney and Kolmogorov-Smirnov tests) were used to find relations between variables.
- A P-value ≤ 0.05 was considered statistically significant.

Discussion

- Most interestingly, there was no correlation between the prevalence of AS consumption and chronic illnesses even diabetes which means that people are consuming AS without a medical reason.
- Knowledge level of chronically ill people wasn't statistically different from healthy people which indicates that we should raise awareness.
- General consumption of AS is quite high while knowledge level is considerably low which illustrates how uncontrolled the consumption is.

Limitations

- The sample was not normally distributed. Female participants were more than males and younger population was more responsive than those who were older. This is most likely to be due to convenience sampling which could've been avoided by simple random sampling.
- Hidden AS were not accounted for, compared to products which had clear labels containing AS.

Recommendations

- To raise awareness about AS consumption through campaigns and social media.
- Conduct workshops for diabetics and other chronically ill people to teach them about the advantages and disadvantages of AS and encourage them to opt for more natural diets rather than going for AS.

Conclusion

- The younger population was found to have better knowledge than those who were older. However, the general population's score was suboptimal.
- While the rate of AS consumption in the UAE was found to be high, artificially sweetened beverages being the highest, knowledge about those substances was minimal.
 - This problem requires measures to be taken to raise the population's awareness about AS in general as well as their risks.

References

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