

Health promotion campaign from student approach - The lesson learned for the upcoming medical doctor; The effects of a campaign to reduce consumption of sugar-sweetened beverages in medical students

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Abstract

Aim: To encourage first year medical students to have better health by drinking more water and being role models in health promoting lifestyle.

Methods: The campaign was launched in February 2016 with seven main activities, convinced via social networking apps (Line and Facebook). The pre and post questionnaires were launched via Google Forms regarding the effective activities and participants' drinking behaviour. Data were analysed by descriptive statistics and dependent t-test.

Results: Response rate for the questionnaire was 74.71% (127/170). After 4 weeks of the campaign, the average water intake was significantly increased ($t = 6.359, p < 0.05$). The average consumption of sugar-sweetened beverages was significantly decreased ($t = -8.256, p < 0.05$). Additionally, when comparing from the seven activities, the most top three preference activities are 'Info & suggestions', 'Sugar Hunt' and 'Sugar Free Be Rich'.

Conclusions: Nowadays, people are preferring to consume sugary drinks instead of regular water and many may assume that computer games and social media are prevalent issues. But in reality if we use technology wisely, it would even provide us with a much more efficient method to reach the target group. Our study, thereby, then brings upon the appropriate aspect of games and social media in order to resolve the current issues. However, some activities have to be improve to attract more of the target group and the duration of the campaign should be increased for better long-term behavioural change.

Keywords: Health Promotion, Medical Students, Obesity, Lifestyle

I. INTRODUCTION

Global prevalence of non-communicable diseases (NCDs) is prominently increasing worldwide and kills more than 36 million people each year (World Health Organization, 2016). The 4 main types of non-communicable diseases are cardiovascular diseases, cancers, chronic pulmonary diseases and diabetes. These diseases are caused as a direct result of life style and environmental factors that include genetics, ageing, poverty and globalisation of unhealthy lifestyle. For example, poverty is a barrier to accessing health service

and globalisation of unhealthy life style like physical inactivity or expose to harmful products.

Up to this present, changing of the world leads to unhealthy lifestyles like physical inactivity, smoking, alcohol abuse and eating unhealthy diets. Eating and drinking behaviour have been changed. Changing of eating behaviour are overeating, eating high calories or fast food. In addition, when considering on drinking behaviour, a variety of beverages which are easily accessible, delicious and inexpensive causes the

preference of sugar-sweetened beverages (SSB) over pure water. Drinking a much more level of these SSB increases the risk of overweight, obesity, and diabetes (Al-Qahtani, 2016; Shah et al., 2014).

Despite the fact that the medical students are the upcoming doctors who should be the role models of health promotion, many studies have found that medical students have unhealthy dietary habits especially drinking SSB (Frank, Carrera, Elon, & Hertzberg, 2006).

Therefore, the campaign "You are what you drink" was launched in order to encourage the medical students to consume water instead of sweetened beverages. The promising outcome from these promoted activities is to drive them to have better health and additionally help them to be role models in health promoting lifestyle.

II. METHODS

A purposive sampling method was used to recruit 170 of first year medical students, Thammasat University, to participate the interventional study which designed by 7 main activities as shown in the details below. In brief, there were (1) Plant Nanny, (2) Info & suggestions, (3) Infused water, (4) Drunk in love, (5) Sugar Free be rich, (6) Drink for... and (7) Sugar hunt. All of these activities were launched via social networking apps (Line and Facebook) so these activities are directly broadcast to the target group.

Activities	Detail
Plant nanny (1-29 Feb 2016)	The water reminder application was offered to encourage drinking in a proper amount.
Info & suggestions (1-29 Feb 2016)	To inform and suggest tips for drinking more water and reducing sugary drinks.
Infused water (6-9 Feb 2016)	Drinking infused water instead of sugar-sweetened beverages for better health.
Drunk in Love (12-14 Feb 2016)	To activate the target group to participate in the campaign by sharing photos with caption about love.
Sugar free be rich (19-22 Feb 2016)	The activity that encourage the target group to avoid sugar-sweetened beverages for good health and saving more money.
Drink For... (22-24 Feb 2016)	To activate the target group to participate in the campaign.
Sugar Hunt (24-26 Feb 2016)	The activity that have the objective to raise awareness of sugary drinks and cutting down on drinking them.

Additionally, before starting and after finishing the interventional period, the participants were assigned to complete pre and post self-administered questionnaires were launched via Google Forms. The online questionnaires consist of 5 items regarding the SSB consumption and the effective activities that could improve the beverage consumption. These questionnaires were used to collect the participants' drinking behaviour data which were analysed by descriptive statistics and dependent t-test.

Importantly, to attract the participants' attention, prizes was offered in each activity. The students who mark their water intake every day will have a chance to win the special prizes at the end of the project.

III. RESULTS

The number of participated first year medical students was 127 from 170 (response rate of 74.71%). 36 of the participants are male and 91 are female. They have mean age of 17.62±0.64 year old. After 4 weeks of the campaign, the average water intake was significantly higher than the beginning ($t = 6.359, p < 0.05$). Additionally, the average consumption of SSB was statistically significant decreased ($t = -8.256, p < 0.05$). Moreover, the most preference activities based on number of votes were also verified, there were 'Info & suggestions', 'Sugar Hunt' and 'Sugar Free Be Rich'.

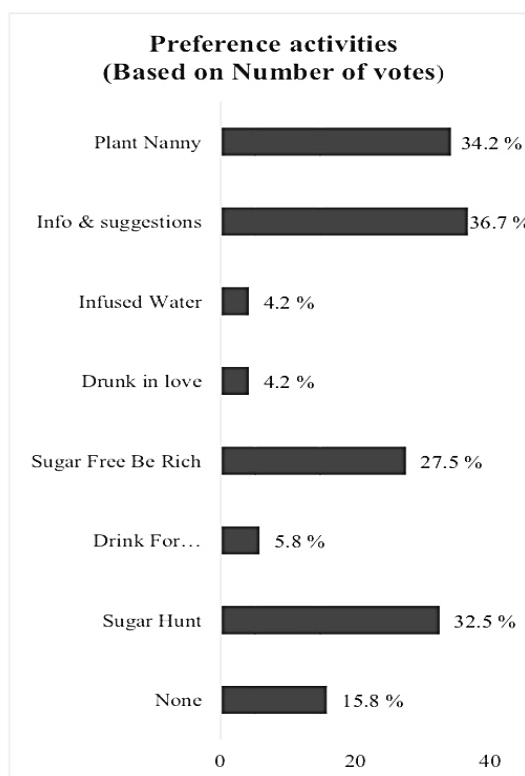


Figure 1. The 7 main activities to encourage medical student (left) and the percentage of the preference activities based on number of votes (right)

IV. DISCUSSION

From the results of the campaign, we found that the participants' average water intake was increased and the average consumption of SSB was decreased. Importantly, the most preference activities were 'Info & suggestions', 'Sugar Hunt' and 'Sugar Free Be Rich'.

First of all, 'Info & suggestions', it might be because the participants received the information and suggested tips for drinking more water and reducing SSB consumption, so this activity is one of the most popular activities in our campaign.

Second, 'Sugar Hunt', this activity is one of the most preference activities due to its incentive of winning the competition.

Third, 'Sugar Free Be Rich', a reason of the activity's popularity might be its ability to raise participants' awareness of amount of money wasted on SSB.

However, some activities were not suitable for them such as 'Infused water'. It might be because finding fruits is hard work for them. In addition, 'Drunk in Love' during the Valentine's week and 'Drink for...' did not improve the drinking behaviour because its influence was in the short duration; therefore, they could not create enough impact.

V. CONCLUSION

In the current era of the fast changing world, people are preferring to consume SSB instead of regular water and many may assume that computer games and social media are prevalent issue. But in reality if we use technology wisely, it would even provide us with a much more efficient method to reach the target group. Our study, thereby, then brings upon the appropriate aspect of games and social media in order to resolve the current issues and improve the quality of life. The issues are not only being the high rate of SSB consumption, but the collective social matter as a whole.

Note on Contributors

Nattabhorn Bunplook, Mechita Kongphirromcheu, Priyapat Phatinawin are medical students from Collaborative Project to Increase Production of Rural Doctor (CPIRD) at Medical Education Centre Buddhasothorn Hospital. All of them contributed equally in the conception, experimental design and implementation of the study.

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All authors read and approved the final manuscript.

Ethical Approval

This study was approved by the Human Ethics committee of Thammasat University No. I (Faculty of Medicine) (IRB No. 097/2560).

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Declaration of Interest

The authors declare that they have no competing interests.

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