

Effects of Smoking on the Performance of the International Federation of Muay Thai Associations (IFMA) Youth Muay Thai Championships, Bangkok in 2018

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Background: Smoking habit in the youth is a new target of most tobacco companies. This habit can retard development and performance in athletes.

Objectives: To find out the prevalence and effects of smoking in the IFMA Youth World Muay Thai Championships, Bangkok 2018, we carried out as a short cohort study during the game.

Methods: Seventy-five candidates of the game with their ages ranging between 8 and 17 years, 70 males and 5 females, were interviewed and examined as the ordinary regulation. Furthermore, smoking and CO measurement from forceful expiration were also done in these candidates. They were followed up until the end of the game. Correlation among smoking, level of CO and the performance of the candidates were found out.

Results: Forty five of seventy-five or 60% of the candidates reported they did smoke. Twenty of the forty-five smoker candidates, 26.6%, did smoking every day ranging from 1 to 15 times a day. CO measurement among these smoker candidates revealed 1 to 9 ppm. On the other hand, CO measurement showed 0 to 1 in the nonsmoker candidates. Two of the candidates in non-smoking group received Gold Medal Award. In the candidates who could not pass the first round 28/32 or 87.5% were in the smoking group with CO in their force expiration over 5 ppm. Furthermore, none in the smoking group could pass the final contest.

Conclusion: Prevalence of smoking habit in candidates of the IFMA Youth Muay Thai Championships 2018 was very high. Smoking has negative effect on their performance of the game.

Keywords: CO measurement, IFMA, Muay Thai, Performance, Tobacco Smoking, Youth

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Received: 5 Aug 2022 | **Revised:** 8 Aug 2022 |

Accepted: 18 Aug 2022

**J Med Glob 2022 September; 1(2) ISSN: 2821-918X
(Online)**

Website: <https://he01.tci-thaijo.org/index.php/JMedGlob/>

How to cite this article: Supopak A, Waikakul S, Vanadurongvan V. Effects of Smoking on the Performance of the International Federation of Muay Thai Associations (IFMA) Youth Muay Thai Championships, Bangkok in 2018. J Med Glob. 2022 Sep;1(2):110-112.

INTRODUCTION

Anti-smoking is one of the campaigns which are implemented among ASEAN Countries. The operation was also carried out in every part of Thailand. The Medical Association of Thailand is one of the outstanding organizations in anti-smoking activities.

The International Federation of Muay Thai Associations (IFMA) started as a small federation with several enthusiastic countries more than two decades ago [1]. It was officially inaugurated in 1993. Furthermore, in 1998, IFMA was recognized by the Olympic Council of Asia. This organization consisted of 130 member countries worldwide with 5 continental federations. IFMA Youth World Muay Thai Championships is operated annually, and the host country is selected by the board committee of IFMA. Thailand hosted the IFMA Youth World Muay Thai Championships, Bangkok 2018.

This study was carried out with the aim to find out the prevalence and the effects of smoking on the performance of the IFMA Youth Muay Thai Championships, Bangkok in 2018.

MATERIALS AND METHODS

The study was carried out as a short cohort study during the game. There were 152 countries with 350 candidates participated in the game. The contest was classified in 26 classes according to sex, age, and weight of the candidates. However, the candidates of some countries could not be enrolled in the study. Therefore, only 75 candidates, 70 males and 5 females with their ages ranged between 8 – 17 years old, were included in our study. All participants underwent 1) history taking including smoking experience and consumption, 2) physical examination and 3) Carbon monoxide (CO) measurement using Smokerlyzer, Bedford Scientific Ltd, England. Correlation among smoking, level of CO and the performance of the candidates were found out. Descriptive analysis was used in the study.

RESULTS

Forty five of seventy-five or 60% of the candidates reported that they did smoking. Twenty candidates, 26.6%, did smoke every day ranging from 1 to 15 times a day. CO measurement among the smoker candidates revealed 1 to 9 ppm. On the other hand, CO measurement showed 0 to 1 in the nonsmoker candidates. Two of the candidates in non-smoker group received Gold Medal Award. In the candidates who could

not pass the first round 28/32 or 87.5% were in the smoker group with CO in their force expiration over 5 ppm. Furthermore, none in the smoker group could pass the final contest and none of them received Gold Medal Award.

DISCUSSION

Smoking habit with a certain amount of tobacco consumption was rather high among young athletes in the IFMA Youth World Muay Thai Championships, Bangkok 2018. This data could be compared to some study reveal new trend in tobacco and drinks consumption among young athletes [2]. In habitual smoker oxidative stress and inflammation were elevated during basic training [3]. Smokers reported significantly more wheezing and sputum production during exercising than non-smokers which could lessen their performance [4]. In the IFMA Youth Muay Thai contest, Bangkok, we found similar finding which could compare to other report. Many authors also reported negative effects of smoking on physical performance of young population using FEV₁ [5-15]. They suggested that smoking was a significant risk factor. However, their reports have many confounding factors. In our study, the direct negative effect of smoking on athletic performance was clearer shown. Our enrolled athletes were rather unique. They were youth Muay Thai athletes which have similarity in training and physical factors. Only smoking habit and the present of carbon monoxide were only the different factors between the groups.

More activities on anti-smoking must be carried out in the youth. Sponsorship of tobacco industry should be prevented [16]. Furthermore, tobacco consumption in the youth usually results in an endless addiction [17]. Our result revealed negative effect of heavy smoking in the performance of the candidates, even though the number of the enrolled candidates was rather small.

The weak points of the study were 1) most of the enrolled candidates were male, 2) the sampling out of the candidates could not be done as some of the staffs coaches did not agree to allow their candidates to be enrolled, 3) the time of history taking was too short as all candidates must be transferred to the registration point on time and 4) the number of the enrolled candidates was rather small (75/ 350 or 21% were enrolled)..

CONCLUSION

In this short cohort of the candidates of IFMA Youth World Muay Thai Championships, Bangkok 2018,

smoking revealed negative effect on the performance of these athletes.

Acknowledgement: Thai Physicians Alliance Against Tobacco (THPAAT) kindly provided the CO detector for this study.

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