RESEARCH ARTICLE　　　　　　　　　　　　　　　　　　　　　　　　　OPEN ACCESS

Prevalence and Determinants of Smoking Among Health Science Students in Centro Escolar University

Myke Christian S. Balingit[1], Yuki V. Sohn[1], Arcie Joseph B. Bulus[1], Lance Christian I. Reyes[1] and Dr. Penuel P. David, RM, RPh, PhD[1,2]

1Department of Pharmacy and Medical Technology, Centro Escolar University Malolos, Philippines
2School of Pharmacy, Centro Escolar University Manila, Philippines

balingit1800379@mls.ceu.edu.ph, sohn1800529@mls.ceu.edu.ph, bulus1800357mls.ceu.edu.ph, reyes1800491@mls.ceu.edu.ph, pdavid@ceu.edu.ph

\-************************\-

Abstract:

Context: In this time of pandemic, university students are prone to stressors with the new normal set-up of classes. Specifically, healthcare students who are seen as future role models of health care must preserve their image within the community. To gather information in the form of an online survey from participants which will help to evaluate the prevalence and determinants of smoking. This study will be conducted to know the risk factors and prevalence of nicotine use among Health Science Students in Centro Escolar University. With this, the researchers aim to find out the prevalence of smoking among health science students in Centro Escolar University. In this study, the researchers aimed to determine the prevalence of smoking among health science students on campus. The research also aims to identify the common beliefs and motivators of smoking through a standardized questionnaire. The online survey tool was distributed to the respondents through a link of a google survey form sent on their social media or email. After all the target number of respondents have answered the data was gathered and analysed using Microsoft excel and SPSS. The results have shown that the prevalence of smoking in the university is 20.69%.

Methods: The researchers used anonline platform using Modified Global Adult Tobacco Survey (GATS) survey questionnaire whichconsist of 15 multiple-choice containing questions about tobacco motives with a 5-point Likert scale. Which were distributed to Three hundred eighty-two (382) Health Science Students.

*Results:*Researchers found that the affect regulation motive is the most likely motive for smokers of health science students in CEU.Smokers regulate their emotion via deliberate reappraisal and smokers' cigarette craving is associated with negative emotional arousal.

Conclusions: Most of the Health Science Students in Centro Escolar University Philippinesare non-smoker.

Keywords: **smoking, cigarette, nicotine consumption, health science, college students**

\-*********************\-

I. INTRODUCTION

Smoking has been associated with multiple health problems and is considered to be a preventable risk factor for six of the eight leading causes of morbidity and mortality at the global level. Smoking is a serious and growing public health problem globally, with a large number of tobacco-associated deaths occurring in low- and middle-income countries such as the Philippines. Data suggest that tobacco smoking will kill more than 8 million people each year worldwide by the year 2030. According to the World Health Organization (2020), there are about 1 billion smokers in the world, 80% of whom are in developing countries.

People indulge themselves with smoking. Despite national efforts to suppress tobacco consumption, smokers find themselves defying rational thinking; they continue, despite acknowledging the harm they self-inflict with some even reporting it is not enjoyable - yet they do it anyway (West, 2017).

Other than use of cigarettes, another alternative nicotine product is trendy these days. E-cigarettes. According to U.S. Food & Drug Administration (2020), young people's brains develop up to their mid-twenties and e-cigarettes are specifically dangerous when used by children and adolescents during this period. Exposure to nicotine during youth can lead to addiction and cause long-term harm to brain development.

In the Philippines, the mental illness is the third most prevalent form of morbidity, there are around 88 cases of mental health problems for every 100,000 Filipinos (Malindog-Uy, 2020). Nonetheless, in this time of COVID-19 Pandemic, the front liners including Medical Technologists would experience anxiety attacks and may have a certain level of anxiety, particularly in the workplace that may affect the work performance and productivity.

This study will serve as a legitimate basis regarding the Anxiety Level of Registered Medical Technologists working in hospital-based laboratories in the City of Malolos Bulacan during the COVID-19 Pandemic. The end product of this research may be utilized as a premise regarding the coping strategies that are needed to ensure positive results.

II. MATERIAL AND METHODS

The study uses descriptive survey research. A descriptive method of research will be employed in the study. According to Salustiano (2009), descriptive research answers specific questions by describing and elaborating on the nature of a certain phenomenon. The method that would be utilized in this study is quantitative-descriptive with the aim that the researchers would determine the prevalence and beliefs of smoking among Health Science Students in Centro Escolar University.

Snowball sampling techniques will be used by the researchers. The number of health science students will come from the three campuses of Centro Escolar University. To get the sample size, the researchers have used the Slovin's formula with a total population of 8,654 and a margin of error of 5%. A sample size of 382 respondents will be obtained.

The research will be conducted through online platforms where the researchers may contact prospective respondents. The instrumentation will then be converted into a web-based survey questionnaire format for ease of access and a research procedure with no direct person contact. Which were distributed to Three hundred eighty-two (382) Health Science Students. The researchers waited a week to collect the responses of students from google forms that had been sent through social media and gmail accounts. The collection of data was done using the modified Global Adult Tobacco Survey containing questions about tobacco motives.

The survey questionnaire comprises 3 parts. Part I consists of the respondent's consent form

participation. Part II consists of the demographic profile: name (optional), age, year level, campus they belong to and gender. Part III consists of Tobacco motive inventory. All of the questions are in a form 5-point Likert scale.

III. STATISTICAL ANALYSIS

The data results gathered were encoded for computer analysis. The researchers use SPSS for encoding the data and translating it to graphs and tables. For the interpretation of data, the following statistical treatment will be utilized.

Frequency and percentage distribution were utilized to interpret the data on the profile of the respondents as to age, group, gender, campus, frequency of smoking, and motives. The formula is as follows:

Formula: $\% = \frac{f}{N} \times 100$

Where:

f = frequency of the respondent's answer

N = total number of respondents

$\%$ = percentage of the respondents

2. Mean

Formula: $x = \frac{\sum x}{N}$

IV. RESULT AND DISCUSSION

Researchers found that the most likely motive for smoking among smokers of health sciences students in CEU is to affect regulation motives. Smokers regulate their emotion via deliberate reappraisal and smokers' cigarette craving is associated with negative emotional arousal. Dierker L. et al. in (2015). found that social smoking is a more important motivator for adolescents. The results of our study only found social motives to be neutral and affect regulation to be the most likely motive for smoking among health science students in CEU.

Classification	Strongly Agree (5)		Agree (4)		Neutral (3)		Disagree (2)		Strongly Disagree		Mean	V.I.
	f	%	f	%	f	%	f	%	f	%		
Motives	6	7.28	25	31.33	20	25.63	16	20.57	12	15.19	2.95±1.16	Neutral
Self-enhancement Motives	9	11.08	27	34.18	20	25.63	16	21.52	8	9.49	3.18±1.13	Neutral
Boredom Relief Motives	17	21.52	29	36.08	13	15.82	12	15.19	9	7.39	3.41±1.30	Neutral
Affect Regulation Motives	28	34.94	34	42.53	9	11.65	3	4.30	5	6.58	3.95±1.10	Agree

Scale	Range	Verbal Interpretation
5	4.51-5.00	Strongly Agree
4	3.51-4.50	Agree
3	2.51-3.50	Neutral
2	1.51-2.50	Disagree
1	1.50 and below	Strongly Agree

Classification	Mean	Verbal Interpretation
Social Motive (1-4)	2.95 ± 1.16	Neutral
Self enhancement Motive (5-8)	3.18 ± 1.13	Neutral
Boredom Relief Motive (9-10)	3.41 ± 1.30	Neutral
Affect Regulation Motive (11-15)	3.95 ± 1.10	Neutral

For Social Motive (items 1-4) all responses are neutral. For self-enhancement motives (items 5-8) all responses are neutral except for item number 6.

For Boredom relief motives (items 9-10) both items verbal interpretation is neutral. While for the Affect Regulation Motives (items 11-15) verbal interpretation is agreed. To break the neutrality, the researchers decided to look at the responses and recount them according to their frequency. Agree and Strongly Agree responses were combined and Disagree and Strongly Disagree were combined too.

For Social Motives, a total of 31 smokers agreed, 20 remained neutral, and 28 smokers disagreed. This can be interpreted that slightly smokers agree to the motive. For Self-enhancement Motives, a total of 36 smokers agreed, 20 remained neutral, 23 disagreed. This can be interpreted those smokers slightly agree. For Boredom Relief Motives, a total of 46 smokers agreed, 12 remained neutral. 21 have disagreed.

V. CONCLUSION

20.69% of the sample reported that they are smoking. Compared to similar studies, the prevalence of smoking among health science students in Centro Escolar University is lower. An indication that more students are keeping their attitude, habits and lifestyle pattern in check with their future profession. The study also found out that affect regulation is the most likely motive for their smoking.

ACKNOWLEDGEMENT

REFERENCES

[1] Anjum S., Srikanth M.K., Reddy, P., Monica, M., Rao, Y. & Sheetal, A. (2016). Reasons for smoking among the teenagers of age 14–17 years in Vikarabad town: A cross-sectional study. J Indian Assoc Public Health Dent 2016. 14(1), 80-83. doi: 10.4103/2319-5932.178733

[2] Baring R., Lee, R., & Sta. Maria, M. (2017). Exploring The Characteristics of Filipino University Students as Concurrent Smokers and Drinkers. Asia-Pacific Social Science Review. 17(1), 80-87. https://www.researchgate.net/publication/318242387_Exploring_the_characteristics_of_filipino_university_students_as_concurrent_smokers_and_drinkers

[3] Cavazos-Rehg, P. A., Krauss, M. J., Sowles, S. J., Spitznagel, E. L., Grucza, R., Chaloupka, F. J., & Bierut, L. J. (2016). Multiple Levels of Influence That Impact Youth Tobacco Use. Tobacco regulatory science, 2(2), 106–122. https://doi.org/10.18001/TRS.2.2.2

[4] Endalamaw A., &Tezera, N. (2019). Current Cigarette Smoking and Its Predictors among School-Going Adolescents in East Africa: A Systematic Review and Meta-Analysis. International Journal of Pediatrics. 1-9. doi: 10.1155/2019/4769820.

[5] Gaete, J., Ortúzar, C., Zitko, P., Montgomery, A., & Araya, R. (2016). Influence of school-related factors on smoking among Chilean adolescents: a cross-sectional multilevel study. BMC pediatrics, 16, 79. https://doi.org/10.1186/s12887-016-0612-z

[6] NIDA. 2020, January 8. Vaping Devices (Electronic Cigarettes) DrugFacts. Retrieved from https://www.drugabuse.gov/publications/drugfacts/vaping-devices-electronic-cigarettes

[7] NIDA. (2021). What are the physical health consequences of tobacco use? Retrieved from https://www.drugabuse.gov/publications/research-reports/tobacco-nicotine-e-cigarettes/what-are-physical-health-consequences-tobacco-use

[8] Hossain, S., Hossain, S., Ahmed, F., Islam, R., Sikder, T., & Rahman, A. (2017). Prevalence of Tobacco Smoking and Factors Associated with the Initiation of Smoking among University Students in Dhaka, Bangladesh. *Central Asian journal of global health*, *6*(1), 244.

[9] Business Research Methodology (n.d.). Descriptive Research. Retrieved from: https://research-methodology.net/descriptive-research/