

Research Article

# EFFECTS OF ELECTRONIC CIGARETTES ON PHYSICAL AND MENTAL HEALTH AMONG YOUNGSTERS: A CROSS SECTIONAL STUDY

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## Abstract

**Objective:** The basic aim of the study is to create awareness and evaluate the knowledge, attitude and perception of youngsters towards the use of e-cigarette.

**Methodology:** A questionnaire based survey was generated through Google form and circulated through social media platforms the target audience age was 18 years-40 years' data were analyzed through Statistical Software (SPSS).

**Results and Discussion:** In this study n=1000 participants were participated in the survey 450 were females and 550 were males, the participants were 18 years-20 years of age included (50) males and (100) females, 20 years-30 years (200) males and (100) females whereas 30 years-40 years of age included (300) males and (250) females, among them n=433 use vape/e-cigarette while n=567 do not use this. N=113 respondent respond that they don't know that e-cigarette have harmful ingredients in it, n=285 participants faced depression, anxiety and mood swings without it whereas n=334 respond that its consumption causes severe mental and physical health.

**Conclusion:** The basic aim of the survey is to create awareness among users to reduce and prevent the use of vape-cigarette as it causes severe consequences towards the health this study enhances the power of health system that in collaboration of school and offices through awareness session can reduce its use. *ASEAN Journal of Psychiatry, Vol. 25 (9) November, 2024; 1-5.*

**Keywords:** Psychiatry; Depression; E-cigarette; Mental Disturbance; Anxiety; Enjoyment

## Introduction

Electronic cigarettes (e-cigarettes) are a sort of new type of nicotine conveyance gadget and the pervasiveness of their utilization is quickly filling in numerous countries [1]. The first of these gadgets that began the pattern being used we portray in this report was imagined by a Chinese drug specialist, Hon Lik, in 2003 [2]. The United States patent application for the gadget expresses that the item is "An electronic atomization cigarette that capabilities as substitutes for stopping smoking and

cigarette substitutes" [3]. The electronic-cigarette (e-cigarette) is an electronic gadget, otherwise called Vape, containing a cartridge loaded up with fluid nicotine or potentially different synthetic compounds, delivering smoking suspension [4]. Nicotine is an exceptionally drug and youths and youthful grown-ups might be at high gamble of fixation [5]. Nicotine withdrawal impacts are like irritation, nervousness, unfortunate focus, memory debilitation and sleep deprivation can happen after discontinuance of constant nicotine use [3]. E-cigarettes have been proposed as a way

to diminish nicotine reliance and are accounted for to be less habit-forming than customary cigarettes. Nonetheless, various records demonstrate that people can build a reliance on e-cigarettes, encountering normal side effects related with nicotine habit. Moreover, the utilization of e-cigarettes has been connected to an expanded gamble of compulsion, especially among youths, who might be presented to more elevated levels of nicotine contrasted with the people who smoke regular cigarettes, as e-cigarettes are much of the time utilized in conditions where smoking is disallowed. While a promoter for e-cigarettes as a device to help with smoking discontinuance or to relieve habit, others have detailed that their utilization might impede fruitful stopping endeavors. The effect of e-cigarettes on diminishing the recurrence of nicotine utilization stays huge. Given the vulnerability encompassing the potential for dependence on e-cigarettes, we have chosen to lead a review pointed toward inspecting the examples of e-cigarette use among selective e-cigarette clients and double clients, as well as researching the impacts of e-cigarettes among youthful grown-ups who use either cigarettes or e-cigarettes. The electronic E-cigarette comprises of a battery, a microprocessor, a red circle recreating a consuming cigarette tip, a cartridge containing a fluid (propylene glycol in water) and a vaporization chamber, which produce a spray that reproduces the smoke of a Cigarette. Quantitative and subjective investigations have recognized a wide assortment of compound parts in the cartridges, top off arrangements and vapor sprayers of e-cigarettes. E-liquid seasoning compounds have additionally been displayed to add to expanded degrees of unsafe carbonyls (for the most part) or furans (for instance, furfurals coming about because of the warming of sugars). Vreeke and partners showed that not all seasoning particles break down straightforwardly into the essential items noticed. For example, Nuclear Magnetic Resonance (NMR) investigation uncovered that  $^{13}\text{C}$ -named triacetin converts into acidic corrosive, which thusly catalyzes the debasement of propylene glycol and glycerol into acrolein, acetaldehyde and formaldehyde hemiacetals. Examinations were coordinated by a singular study place, Lab stat worldwide Unlimited Liability Corporation (ULC) (Labstat; Kitchener, Ontario, Canada), with the exception of polychlorinated dibenzodioxins and radioactive isotopes, which were subcontracted by Lab stat to outside labs [6]. Smoking machine limits for the assessment of tobacco smoke constituents

have been the subject of much debate [6]. The extended puff volume, more restricted inter puff range and anxious ventilation openings lead to higher smoke yields than those under the International Organization for Standardization (ISO) conditions and though furthermore doubtful to address veritable human receptiveness, are seen as by a many individuals to be more representative than ISO data. In the continuous survey, Human Computer Interaction (HCI) limits were used to make tobacco smoke releases for coming about poison measurement [6].

At this point, there are no standardized e-cigarette puffing limits for logical assessments. Studies have uncovered the use of a broad assortment of puffing limits by e-cigarette buyers and various characteristics have been used in machine-based shower science assessments [7]. Several studies reported use of e-cigarette cause mental as well as physical health side effects Vape cigarette has several health impacts as well as on mental health causes psychiatric issues such as anxiety, depression, violence and suicidability. Several articles reported the negative impact of e-cigarette on mental health mood and anxiety disorder related to e-cigarette [8].

## **Materials and Methods**

A questionnaire based survey was conducted from August, 2024 to October, 2024. Google form was designed and the link of which was circulated through social media platforms and collected data were analyzed using Statistical Software (SPSS). A cross sectional approach was undertaken to assess the use of e-cigarette and its impact on mental and physical health. The relevant information was collected online by inviting potential participants' aged 18 years to 40 years through social networks and email in order to achieve a representative sample. Language for questionnaire was in English, the questionnaire included demographic factor, frequency of vape of participants and their knowledge, attitude and perception regarding e-cigarette.

This methodology outlines a comprehensive approach to examining the effects of e-cigarettes on the physical and mental health of young individuals through a cross-sectional study. By combining quantitative data on e-cigarette usage and health outcomes with statistical analysis, the study aims to provide valuable insights that can inform public health policies and interventions

targeting e-cigarette use among young people.

#### *Sample size*

Sample size n=1000, which included males and females both data were analyzed through SPSS.

### **Results and Discussion**

The basic aim of the study is to evaluate the knowledge, attitude and perception towards the use of e-cigarette and their impact on mental and physical health among youngsters. A to the point relevant questionnaire was designed on Google form and circulated through several social media platforms language of the questionnaire quite easy to answer these questions. In this study 1000 participants were involved in which 450 were female and 550 were male, the participants were 18 years-20 years of age included (50) males and (100) females, 20 years-30 years (200) males and (100) females whereas 30 years-40 years of age included (300) males and (250) females, the employment status include (10) male, (5) female of 18 years-20 years of age were employed, 20 years-30 years (150) males and (20) females were employed and 30 years-40 years of age (240) males and (25) females were employed. (40) males and (90) females of 18 years-20 years of age were un employed, (50) males and (80) females of 20 years-30 years of age were un employed and 30 years-40 years of age were un employed, (60) males and (225) females were un employed. The use of e-cigarette was started around 2009 as an alternative [9]. In this study (40) males of 18 years-20 years of age use vape/e-cigarette whereas (3) females of same age use vape, (100) males of 20 years-30 years of age use vape/e-cigarette whereas (10) females of same age use vape and (250) males of 30 years-40 years of age use vape/e-cigarette whereas (30) females of same age use vape while, the participants 18 years-20 years of age included (10) males and (97) females do not use e-cigarette, the participants 20 years-30 years of age included (100) males and (90) females do not use e-cigarette while the participants 30 years-40 years of age included (50) males and (220) females do not use e-cigarette as shown in Table 1. In this study consumption of e-cigarette was more than twice a day n=(314) males and females of all ages consume e-cigarette twice a day Propylene glycol and glycerin are the main base ingredients of the e-liquid. Exposure to propylene glycol can cause eye and respiratory irritation and prolonged or repeated inhalation in industrial

settings may affect the central nervous system, behavior and the spleen [10]. When heated and vaporized, propylene glycol can form propylene oxide, an International Agency for Research on Cancer class 2B carcinogen and glycerol forms acrolein, which can cause upper respiratory tract irritation [11]. In this study the participants 18 years-20 years of age (10) males and (03) females were aware regarding the harmful effect of e-cigarette while (30) males were unaware regarding the harmful effects, the participants 20 years-30 years of age (15) males and (5) females were aware while (85) males and 5 (females) were not aware, while the participants 30 years-40 years of age (150) males and (15) females were aware the harmful effect of the use e-cigarette while (100) males and (15) females were not aware regarding the hazardous effects of e-cigarette Vape cigarette has several health impacts as well as on mental health causes psychiatric issues such as anxiety, depression violence and suicidability. Several articles reported the negative impact of e cigar ate on mental health mood and anxiety disorder related to e-cigarette [7]. In this study findings 18 years-20 years of age (28) males and (03) females faced depression, anxiety and mood swings without it while (12) males were faced any depression without its use, the participants 20 years-30 years of age (82) males and (7) females were faced depression while (18) males and (3) females were not, while the participants 30 years-40 years of age (100) males and (15) females were faced anxiety, depression while (100) males and (15) females were not faced any depression. e-cigarette cause both physical and mental health as ingredients in e-cigarette Propylene glycol and glycerin are the vitally base elements of the e-fluid. Openness to propylene glycol can be a basis for eye and respiratory exacerbation, more, drawn out or rehashed inward breath in modern settings might influence the focal sensory system, conduct and the spleen.

In this study, the participants 18 years-20 years of age (15) males and (3) females were agreed that e-cigarette causes mental and physical health issues while (25) males and (0) females were not believed that it causes any mental and physical issue, while the participants 20 years-30 years of age (70) males and (7) females faced mental and physical health issues while (30) males and (03) females were not faced do not think that it causes mental and health issues. The participants 30 years-40 years of age (215) males and (24) females faced mental and physical health issues

while (35) males and (06) females were not faced do not think that it causes mental and health issues. The basic aim of the study is to highlight

the health issues and concern related to mental and physical health after the use of e-cigarette as it is more common in youngsters (Table 2) [12].

**Table 1. Demographic factors of participants (n=1000).**

Age	Gender		Employed				Use of Vape/e-cigarette			
			Employed		Un employed		Yes		No	
	Males	Females	Males	Females	Males	Females	Males	Females	Males	Females
18-20	50	100	10	5	40	90	40	3	10	97
20-30	200	100	150	20	50	80	100	10	100	90
30-40	300	250	240	25	60	225	250	30	50	220

**Table 2. Questions regarding frequency, knowledge, attitude and perception regarding e-cigarette (n=1000).**

Age	Gender	Frequency of Vape		Knowledge of health hazard substances		Increased depression and anxiety with mood swings without its use		E-cigarette doesn't cause any harm on mental/physical health	
		Twice a day	More than twice a day	Yes	No	Yes	No	Yes	No
18-20	Male	15	25	10	30	28	12	15	25
	Female	3	0	3	0	3	0	3	0
20-30	Male	40	60	15	85	82	18	70	30
	Female	7	3	5	5	7	3	7	3
30-40	Male	25	225	60	190	150	100	215	35
	Female	27	3	20	10	15	15	24	6

## Conclusion

Electronic cigarette smoking is expanding around the world, in spite of the fact that its utilization is exceptionally disputable. It can cause sickness, regurgitating, migraine, shuddering, unsteadiness, stifling, consume wounds, dryness of the eyes and mucous layer, arrival of cytokines and pro inflammatory go between, upper respiratory plot aggravation, unfavorably susceptible aviation route irritation, diminished breathed Nitric oxide (NO) blend in cellular breakdown in the lungs.

As it is more common in young generation it is the duty of health department to make collaborative efforts with offices and schools to provide awareness regarding e-cigarette usage and arrange programs that how they can get rid of the dependency of this device. The findings of this study represents the significant effects of electronic cigarette (e-cigarette) use on both the physical and mental health of youngsters. Physical health impacts, including respiratory issues, cardiovascular risks and potential long-term complications, highlight the harmful consequences of vaping.

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**Received:** 21 October 2024, Manuscript No. AJOPY-24-152093; **Editor assigned:** 23 October 2024, PreQC No. AJOPY-24-152093 (PQ); **Reviewed:** 06 November 2024, QC No AJOPY-24-152093; **Revised:** 13 November 2024, Manuscript No. AJOPY-24-152093 (R); **Published:** 22 November 2024, DOI: 10.54615/2231-7805.47383