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Comparison of vital capacity between tobacco smokers and non-tobacco smokers

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Abstract

The present study was designed to determine Comparison of vital capacity between tobacco smokers and non-tobacco smokers. The study was conducted on total fifty (N=50) subjects are selected 25 tobacco smokers and 25 non tobacco smokers they are from Punjabi university Patiala between age group of 20 - 30 years from the campus and nearby the campus of Punjabi University Patiala were selected as subjects. To know the difference between vital capacity of tobacco smokers and non -tobacco smokers, researcher had selected following two vital capacity parameters as dependent variables FVC (Force Vital Capacity), PEFR (Peak Expiratory flow Rate.. To effect mean, standard deviation and unpaired t-test were employed. The level of signifiacnce choose in to test the hypotheses was 0.05, $P < 0.05$. Results of the study explicated statistically that there was significant difference in FVC (Force Vital Capacity). However, significant difference was found in PEFR (Peak Expiratory flow Rate) of Tobacco Smokers and Non -Tobacco Smokers.

Keywords: FVC (Force Vital Capacity), PEFR (Peak Expiratory flow Rate), Tobacco Smokers and Non -Tobacco Smokers

Introduction

Health is the level of functional or metabolic efficiency of a living organism. In humans it is the ability of individuals or communities to adapt and self-manage when facing physical, mental or social challenges. The World Health Organization (WHO) defined health in its broader sense in its 1948 constitution as "a state of complete physical, mental, and social well-being and not merely the absence of disease or infirmity." This definition has been subject to controversy, in particular as lacking operational value and because of the problem created by use of the word "complete" Other definitions have been proposed, among which a recent definition that correlates health and personal satisfaction. Classification systems such as the WHO Family of International Classifications, including the International Classification of Functioning, Disability and Health (ICF) and the International Classification of Diseases (ICD), are commonly used to define and measure the components of health Conducted a study to analyze the patterns of smoking in urban and rural SGM in a large sample. Researchers conducted an analysis of 4280 adult participants in the Out, Proud, and Healthy project with complete data on SGM status, smoking status, and zip code. Surveys were conducted at 6 Missouri Pride Festivals and online in 2012. Analysis involved descriptive and variety methods, and multivariable logistic regression. Researcher used GIS mapping to demonstrate the dispersion of rural SGM participants. SGM had higher smoking proportion than the non-SGM recruited from these settings. In the multivariable model, SGM identity conferred 1.35 times the odds of being a current smoker when controlled for covariates. Rural residence was not independently significant, demonstrating the persistence of the smoking disparity in rural SGM. Mapping revealed widespread distribution of SGM in rural areas. The SGM smoking disparity persists among rural SGM. These communities would benefit from continued research into interventions targeting both SGM and rural tobacco control measures. Recruitment at Pride Festivals may provide a venue for reaching rural SGM for intervention Bennett *et al.* (2015).

Men and women who smoke tend to show less compliance to screening guidelines than non-smokers.

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The data was collected on pulse rate for both the groups under similar conditions. In order to determine the significant difference between experimental group and control group after degrees of freedom. It is also evident from same table that there was no significant difference in the obtained “t” value (.861) at 0.05 level of confidence of the 14 degree of freedom.

However, a recent study in Korea showed that self-reported female smokers constituted less than half of cotinine-verified smokers. Therefore, the aim of this study was to identify hidden smokers using cotinine- verified method and examine cancer screening behavior according to biochemically verified smoking status. Among 5,584 women aged 30 years and older who participated in the Fourth and Fifth Korea National Health and Nutrition Examination Survey (KNHANES), 372 (6.66%) hidden smokers were identified based on interview responses and verified by urinary cotinine levels. We compared cancer-screening behavior (cervical, breast, stomach, and colon cancer) of female hidden smokers to that of non-smokers and self- reported smokers by cross-sectional analysis. Hidden female smokers had significantly lower adherence to breast cancer screening compared to non-smokers (aOR (adjusted odds ratio) [95% CI] = 0.71 [0.51-0.98]). Adherence to stomach cancer (aOR [95% CI] = 0.75 [0.54-1.03]) and cervical cancer (aOR [95% CI] = 0.85 [0.66-1.10]) screening was also lower among hidden female smokers compared to non-smokers. Self-reported (current) smokers showed lowest adherence to cervical cancer (aOR: 0.64, 95% CI 0.47-0.87), breast cancer (0.47 [0.32-0.68]), stomach cancer (0.66[0.46-0.95]), and colon cancer (0.62 [0.38-1.01]) screening compared to non-smokers, followed by female hidden smokers, then non-smokers. These lower adherence rates of current smokers were attenuated after we incorporated hidden smokers into the current smoker group. Cancer screening adherence of female hidden smokers was lower than cotinine-verified non-smokers but higher than current smokers. Considering the risk of smoking-related cancer among women, identifying hidden smokers is important to encourage appropriate cancer screening Ko et al. (2015) [2].

Methodology

The presented study was conducted with the purpose to determine Comparison of vital capacity between tobacco smoker and non-tobacco smokers. The study was conducted on total fifty (N=50) subjects are selected. 25 tobacco smokers and 25 non tobacco smokers they are from Punjabi university Patiala between age group of 20 - 30 years from the campus and nearby the campus of Punjabi University Patiala were selected as subjects. To know the difference between vital capacity of tobacco smokers and non -tobacco smokers, researcher had selected following two vital capacity parameters as dependent variables:

1. FVC (Force Vital Capacity)
2. PEFR (Peak Expiratory flow Rate)

Table 1: Comparison of Mean, Standard Deviation and T-Value for FVC of Tobacco Smokers and Non -Tobacco Smokers

Variable	Group	Mean	SD	t-Values
FVC	Tobacco Smokers	4.26	0.85	3.64*
	Non Tobacco Smokers	5.08	0.74	

t.₀₅ (48) = 2.01

The findings of Spiro metric test on Tobacco Smokers and Non Tobacco Smokers namely Mean, SD and t values for

FVC are shown in table no 1. The table statistically reveals that the calculated t value 3.64 for FVC of Tobacco Smokers and Non Tobacco Smokers is higher than table value 2.01. Therefore the Values of table show that, there has been significant difference between force vital capacity of tobacco smokers and non- tobacco smokers.

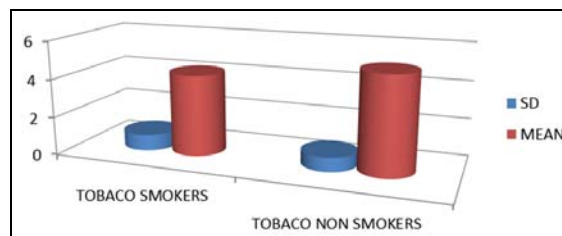


Fig 1: Comparison of Mean, Standard Deviation and T-Value for FVC of Tobacco Smokers and Non -Tobacco Smokers

Table 2: Comparison of Mean, Standard Deviation and T-Value for PEFR of Tobacco Smokers and Non -Tobacco Smokers

Variable	Group	Mean	SD	t-Values
PEFR	Tobacco Smokers	9.76	1.34	2.09*
	Non Tobacco Smokers	10.73	1.87	

t.₀₅ (48) = 2.01

The findings of Spiro metric test on Tobacco Smokers and Non Tobacco Smokers namely Mean, SD and t values for PEFR are shown in table no 2. The table statistically reveals that the calculated t value 2.09 for PEFR of Tobacco Smokers and Non Tobacco Smokers is higher than table value 2.01. Therefore the values of table shows that, there was significant difference between Peak Expiratory flows Rate of tobacco smokers non tobacco smokers.

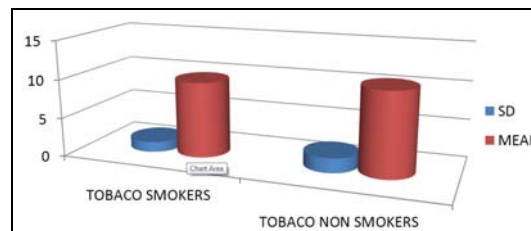


Fig 2: Comparison of Mean, Standard Deviation and T-Value for PEFR of Tobacco Smokers and Non -Tobacco Smokers

Discussion of the Findings

The purpose of the present study was to compare the vital capacity of tobacco smokers and non- tobacco smokers. The study was conducted on total fifty (N=50) subjects are selected 25 tobacco smokers and 25 non tobacco smokers they are from Punjabi university Patiala between age group of 20 - 30 years from the campus and nearby the campus of Punjabi University Patiala were selected as subjects. To know the difference between vital capacity of tobacco smokers and non -tobacco smokers, researcher had selected following four vital capacity parameters as dependent variables:

1. FVC (Force Vital Capacity)
2. PEFR (Peak Expiratory flow Rate)

1. The result of present study proved that there was significant difference between FVC force vital capacity of tobacco smokers and non -tobacco smokers. Further the statistical analysis shows that non- tobacco smokers has more FVC then tobacco smokers. These results of the study confirm the findings of Ruizo et al. (2009) [4] who also found that smoking induced significant effect on FVC.

2. The result of the study proved that was significant difference between PEFR OF tobacco smokers and non-tobacco smokers. These results of the study confirm the findings of Rao et al. (1992) [3] who also reported significant difference between tobacco smokers and non- tobacco smokers the statistical analysis shows that non tobacco smokers has more PEFR then tobacco smokers.

Conclusion of the Study

On the basis of findings of present study, the following conclusions were drawn.

1. The results substantiate that there was significant difference between FVC of tobacco smokers and non - tobacco smokers of campus and nearby the campus of Punjabi University Patiala, Punjab.
2. The results validate that, there was significant difference between PEFR of tobacco smokers and non- tobacco Smokers campus and nearby the campus of Punjabi University Patiala, Punjab.

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