

The Association of Depression, Anxiety, Stress With Leisure Time Physical Activity Among Smokers and Non-Smoker in Delhi-Ncr

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ABSTRACT

Background: Tobacco use is accountable for a significant amount of the decline in life expectancy that is associated with mental disorders. This article focuses on the connection between smokers' and non-smokers' mental health conditions such as depression and anxiety with the leisure time physical activity.

Materials & Methods: A Google form was developed with the Cigarette Dependence Scale (CDS), the Depression, Anxiety, Stress (DASS-21), and the LEISURE-Time Physical Activity. To collect the data, it was sent to inhabitants of the Delhi National Capital Region over several different social media sites (such as Facebook, WhatsApp, and Twitter), where they may respond. The final total on the Google Form, which included replies from a thousand people, was collected. The analysis of the data was performed with the assistance of Microsoft Excel, which was also used in the process of transforming the data.

Results: According to the research findings, cigarette dependence was not discovered in non-smokers at all. However, it was shown to exist in smokers at a rate of 89.727 ± 2.82 . There was a statistically significant difference between both groups, with a *P* value of less than 0.05. When compared with non-smokers, smokers were shown to have significantly higher levels of anxiety, sadness, and stress, and the difference in outcomes between the two groups was statistically significant. The correlation between LEISURE-Time Physical Activity and DASS 21 scores for smokers and non-smokers was checked using Pearson correlation coefficient shows that there is negative correlation among smokers and non smokers for LEISURE-Time Physical Activity and DASS 21 scores.

Conclusion: The findings of this research lead us to the conclusion that smokers have a much higher reliance on cigarettes and reduction in their leisure-time physical activity as compared to the individuals of the study who were nonsmokers. There was negative correlation in the smokers as shows that the smokers have higher depression, anxiety, stress and hence reduction in Leisure Time Physical Activity as we can say that smokers are more effected as compared with non-smokers.

Keywords: Depression, Anxiety, Stress, Leisure Time, Physical Activity, Smokers, Non-Smokers, Delhi-NCR, Mental Health, Physical Activity

INTRODUCTION

During the smoking process, a chemical is burned, and the resulting smoke is often inhaled so that it may be tasted and absorbed into the bloodstream. This is referred to as "smoking." The bulk of the time, the dried leaves of the tobacco plant are used(1). Cigarettes are made by rolling tobacco leaves in a small rectangle of rolling paper. Smoking is the most common technique of taking recreational drugs because it vaporises and distributes the active chemicals into the lungs.(2). These compounds are quickly absorbed into circulation and tissue when inhaled via smoking. When heated aerosol and gas are vaporised, they become inhalable and penetrate deep into the lungs, where active substances are absorbed into the circulatory system. In the case of cigarette smoking, the pharmacologically active alkaloid nicotine is

present in the mixture of aerosol particles and gases.(3). Smoking is an essential part of many religious practises in many cultures. Participants in these rituals smoke to generate trance-like experiences, which they believe may lead to spiritual enlightenment, according to their beliefs.(4).

Smoking is a common method of indulging in recreational drug usage. Tobacco is presently used by over a billion people throughout the globe, the vast majority of whom live in less developed nations. The most common type of tobacco usage is cigarette smoking. Drugs such as opium and cannabis, which are less often used, are examples.(5). Because they are seldom accessible for purchase in commercial contexts, some of these substances, like heroin, are categorised as hard drugs. Factory-made cigarettes are common, but they may also be made by hand using loose tobacco and a roll of paper. Pipes, cigars, bidis, hookahs, bongs, and water pipes are some of the other types of smoking equipment.(6).

Smoking may be used as a kind of "self-medication" by some people to cope with stress. Smoking, on the other hand, has been linked to higher levels of stress and anxiety. As a result of nicotine's immediate calming effect, many people think smoking reduces tension and anxiety. Exhaustion and heightened cravings immediately follow this euphoric state.(7). Tobacco smoking reduces withdrawal symptoms, but it has little impact on anxiety or the underlying reasons of that emotion. Individuals with depression are twice as likely to smoke cigarettes as adults who are not depressed. Neither smoking nor depression are known to be causal factors, since most smokers begin their habit before showing any signs of mental health issues. It's possible that there is a complex relationship between the two. Dopamine is a neurotransmitter that is released by nicotine. Dopamine has a role in promoting positive feelings.(8).

Cigarettes may briefly raise dopamine levels in sad people whose levels are typically low. Dopamine production is cut off by smoking, and this results in a long-term decrease in supply that encourages people to smoke more.(9).

Smoking accounts for a significant portion of the decreased life expectancy linked with mental illness and its high prevalence as a public health problem.(10).

As the severity of a mental illness grows, so does the number of people who smoke. People with mental illness are more likely than the general population to begin smoking at a younger age, to smoke cigarettes more often and intensively, and to become more addicted to nicotine as a result of their mental illness. a recent poll found that 42% of all cigarettes smoked in England were by people with mental illness, although this percentage also includes those with drug misuse concerns(11). Even if the average number of cigarettes smoked per person in the general population is declining, that amount has stayed relatively constant among those suffering from mental illnesses over the previous two decades. As a result, it is of the utmost importance to understand why people with mental illness are more likely to smoke. This essay's primary focus is on the connection between cigarette smoking and mental health issues like depression and anxiety.(12).

However, a few meta-analyses have found that not all data points to a negative correlation between adolescent physical activity and tobacco use. This is because the review studies looked at the data from a variety of perspectives.

Six studies revealed a negative link between smoking and physical activity, whereas nine found no correlation at all, according to Sallis and coworkers (2000) in the journal *Pediatrics*. According to Bauman, Sallis, Dzewaltowski, and Owen (2002) and Sallis et al. (2000), the diversity in results may be attributed to methodological discrepancies across research.(13). These authors argue in favour of their position. Specifically, the choice to account for so-called "third variables" may have an impact on the findings. In the complicated association between teens' physical activity levels and their propensity to smoke, several mediators and moderators may be at work. The influence a predictor has on an outcome variable may be obscured by moderating factors, while the effect a predictor has on an outcome variable may be clarified by mediating variables (Baron & Kenny, 1986)(14). Analysis of data for possible mediators is likely to be essential in order to have a clearer picture of the link between physical activity and smoking. Research on the moderating effects of physical exercise is also needed to further understand how physical activity affects smoking. However, the great majority of research have only reported bivariate correlations, neglecting the effect of mediators and moderators on the link between two variables.(15).

We set out to see whether there was any correlation between recreational physical activity and depressive, anxious, or stressful symptoms among smokers and nonsmokers since no prior studies had explored the issue. The research will involve both smokers and non-smokers in the Delhi-National Capital Region.(16).

STATEMENT QUESTION

Is There Any Association of Depression, Anxiety, Stress with Leisure Time Physical Activity Among Smokers and Nonsmoker in Delhi-NCR?

AIMS AND OBJECTIVES OF THE STUDY

To see the Association of Depression, Anxiety, Stress with Leisure Time Physical Activity Among Smokers and Nonsmoker in Delhi-NCR

HYPOTHESIS

HYPOTHESES - There is association of depression anxiety and stress with leisure-time Physical Activity among smoker and non-smoker.

NULL HYPOTHESES - There is no association of depression anxiety and stress with leisure-time Physical Activity among smoker and non-smoker.

CHAPTER 3 METHODOLOGY

Type of study: Cross-sectional study

Area of Project: Delhi NCR

Sampling Method:

- No of Sample:1000
- Groups: 2 group
- Sample place: Multicentric Grounds

Inclusion Criteria:

- AGE: 20-40 YEARS
- GENDER: Both Male and Female
- SUBJECT: Smokers and Non-smokers

Exclusion Criteria:

- Participants with Neurological Conditions
- Post Operative Participants
- Any fracture cases
- Participants with Musculoskeletal pain
- Pregnant Women

Instrumentation:

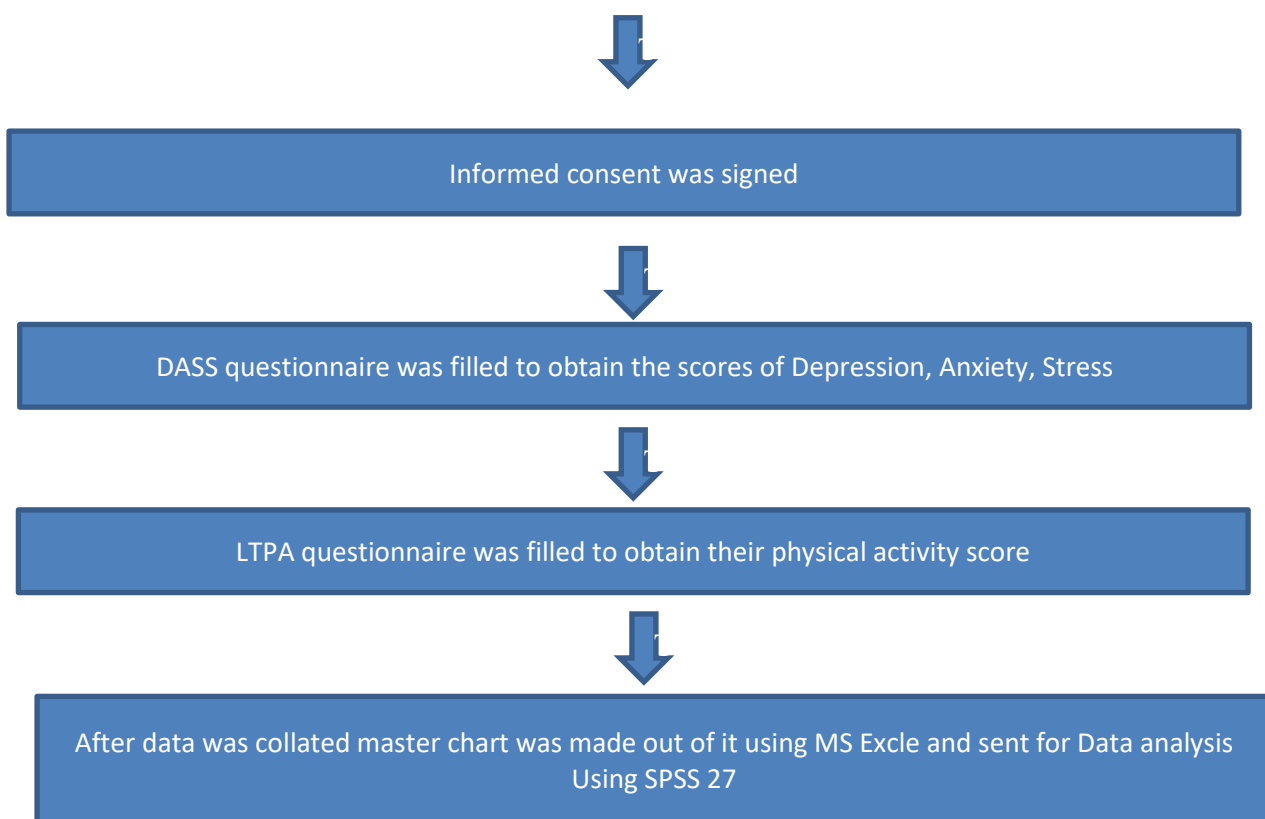
1. The Cigarette Dependence Scale (CDS)
2. Depression, anxiety stress-21 (DASS-21)
3. LEISURE- Time Physical Activity

PROCEDURE

A Google form was developed with the Cigarette Dependence Scale (CDS), the Depression, Anxiety, Stress (DASS-21), and the LEISURE-Time Physical Activity. To collection of data, it was sent to inhabitants of the Delhi National Capital Region over several different social media sites (such as Facebook, WhatsApp, and Twitter), where they may respond. The final total on the Google Form, which included replies from a thousand people, was collected. The analysis of the data was performed with the assistance of Microsoft Excel, which was also used in the process of transforming the data.

PROCEDURE

The population was screened using a CDS questionnaire to obtain smokers after inclusion criteria met



DATA ANALYSIS

The analysis of data was performed using version 27.0 of the Social Science Packaging Software SPSS. A paired t-test was performed to analyse the data. MS WORD 2021 is used for the graphical depiction.

HAPTER 5 RESULTS

According to the research findings, cigarette dependence was not discovered in non-smokers at all. However, it was shown to exist in smokers at a rate of 89.727 ± 2.82 . There was a statistically significant difference between both groups, with a P value of less than 0.05. When compared with non-smokers, smokers were shown to have significantly higher levels of anxiety, sadness, and stress, and the difference in outcomes between the two groups was statistically significant. The correlation between LEISURE- Time Physical Activity and DASS 21 scores for smokers and non-smokers was checked using Pearson correlation coefficient shows that there is positive correlation in smokers for LEISURE- Time Physical Activity and DASS 21 scores and negative correlation in non-smokers.

TABLE NO 1: Demographic Descriptive Statistics.

	AGE	HEIGHT	WEIGHT
Mean	35.56	5.665	73.98
N	500	500	500
Std. Deviation	1.942	.3701	2.752

TABLE 2: The Cigarette Dependence Scale.

	NON-SMOKERS	SMOKERS	P VALUE
The Cigarette Dependence Scale	00.00±0.00	89.72±2.82	P <0.05

TABLE 3: LEISURE- Time Physical Activity

	NON-SMOKERS	SMOKERS	P VALUE
LEISURE- Time Physical Activity	24.02±1.349	21.33±1.830	P <0.05

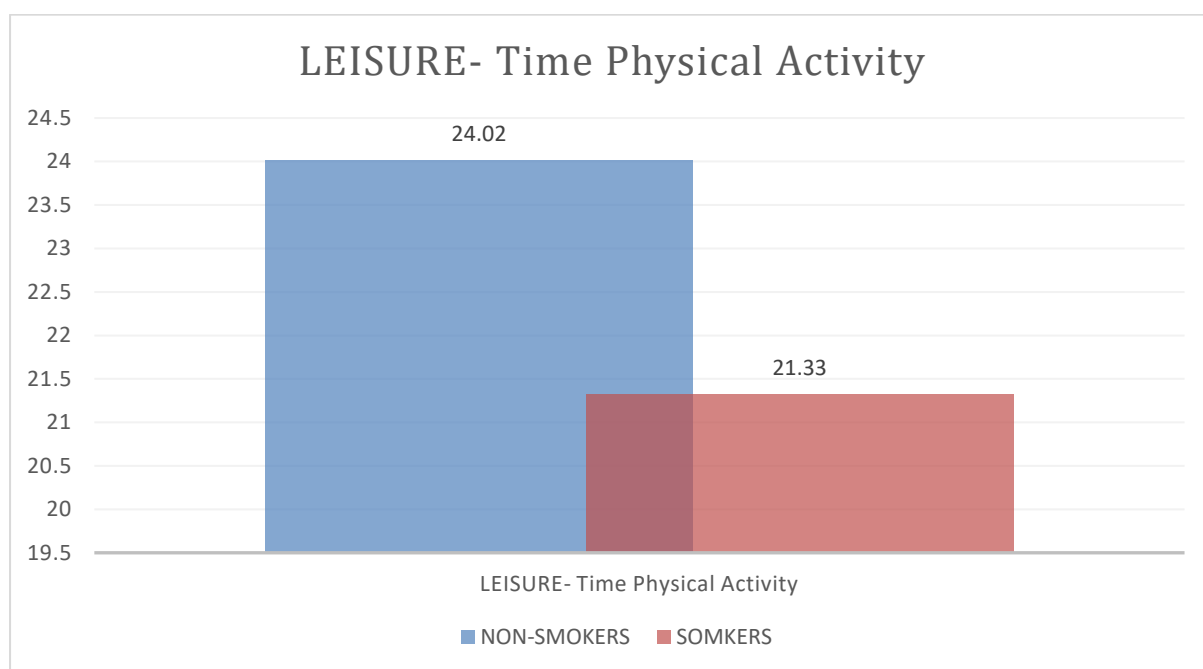
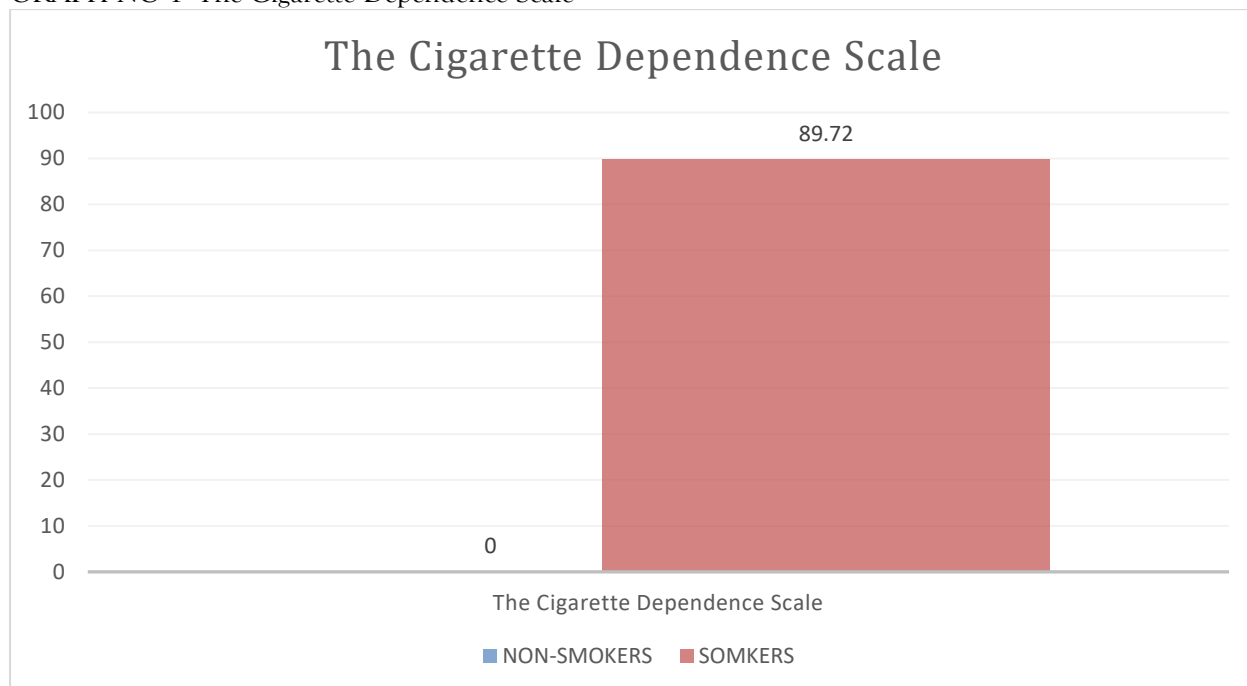
TABLE 4: DASS 21 scores for smokers and non-smokers.

	NON-SMOKERS	SMOKERS	P VALUE
DEPRESSION	11.722±1.823	5.723±0.727	P <0.05
ANXIETY	8.734±1.628	4.732±0.736	P <0.05
STRESS	17.728±1.981	10.828±1.673	P <0.05

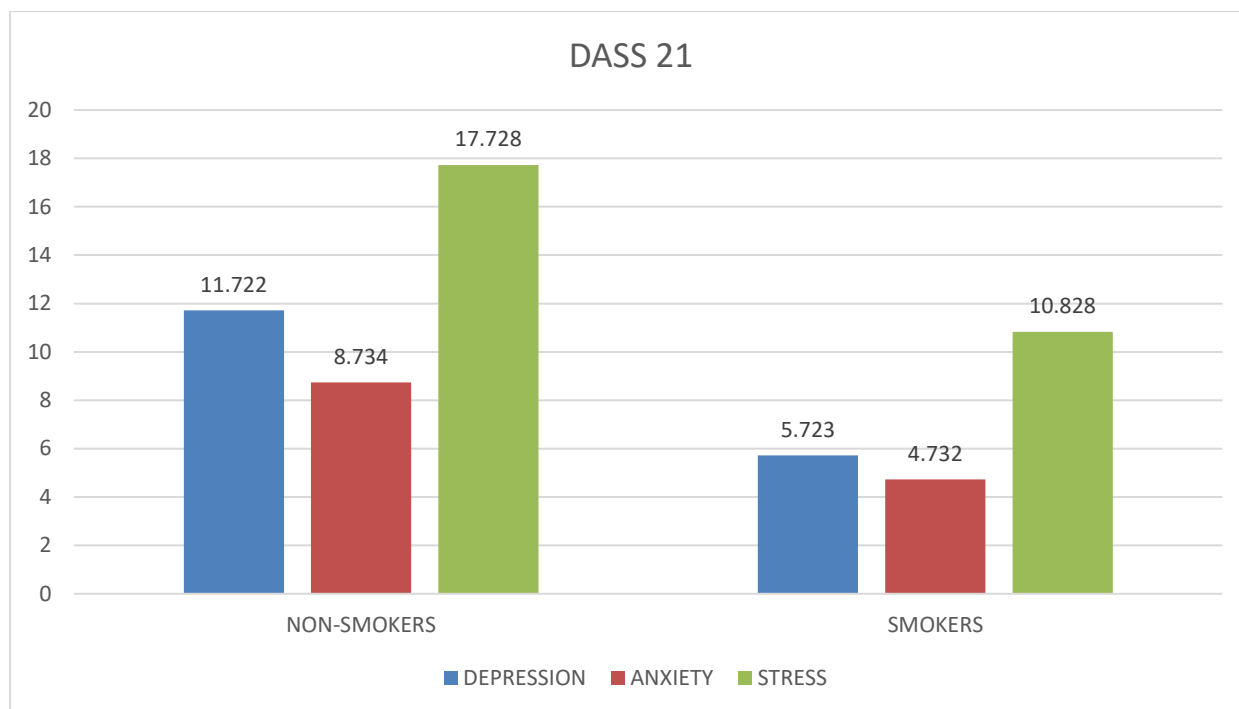
TABLE NO 5: LEISURE- Time Physical Activity and DASS 21 Correlation

CORRELATION	NON-SMOKERS	SMOKERS	P VALUE
LEISURE- Time Physical Activity and DASS 21	-0.627	0.781	P <0.05

GRAPH NO 1- The Cigarette Dependence Scale



GRAPH NO 3- DASS 21 scores for smokers and non-smokers



DISCUSSION

According to the results of the study, cigarette dependency was not found at all in non-smokers. On the other hand, it was shown to exist in smokers at a rate of 89.72 ± 2.82 percent. With a P-value that was lower than 0.05, it was determined that there was a statistically significant difference between the two groups. It was shown that smokers experience much greater levels of anxiety, depression, and stress when compared to non-smokers, and the difference in results between the two groups was statistically significant. There is ongoing research.

The findings by Hamid Highlight et al. in 2012 as the major emphasis of this study, a comparison and contrast were made between students who smoke and those who don't smoke regarding their religious beliefs and the coping mechanisms they use. There was a total of 5261 students pursuing a bachelor's degree at Hormozghan University who took part in the study. The pupils who smoked and those who didn't smoke were chosen using either a web or snowball sampling method. According to the findings and interpretation of the data, non-smoking students exhibited a more positive mean religious attitude than smoking students did. Students who did not engage in smoking had a higher overall mean for their use of coping methods. The study on coping techniques and the research on religious views were shown to have a significant degree of association with one another. It was revealed that religious attitudes were connected to two different coping strategies: anticipation and exhilaration.

CONCLUSION

The findings of this research lead us to the conclusion that smokers have a much higher reliance on cigarettes in their leisure-time physical activity as compared to the individuals of the study who were nonsmokers. When compared with non-smokers, groups of smokers who participated in leisure time and physical activity had a significantly higher incidence of anxiety, sadness, and stress. There was positive correction in the smokers as shows that the smokers have higher depression, anxiety, stress as LEISURE-Time Physical Activity as we can say that smokers are more effected as compared with non smoker.

LIMITATIONS OF THE STUDY:

1) HIGER SAMPLE SIZE

2) MORE CONDITIONS CAN BE INCLUDED FUTURE RESEARCH:

1) ON MALE AND FEMALES SUBJECTS SEPRATLEY CAN BE DONE CONFLICT OF INTEREST-
NON

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