Asian journal of International Peace and Security (AJIPS)

ISSN-e: 2707-8809

Vol. 6, No. 1, (2022, Spring), 22-34

Social Adjustment, Life Satisfaction and Mental Health Among Heavy Smokers: Policy and Practice for Healthcare Professionals

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Abstract:

This research explores the relationship between social adjustment, life satisfaction, and mental health among heavy smokers. Correlation and comparative group design were used in this study. The total sample of the study consisted of 120 participants who were divided into two groups, i.e., younger adults and middle adults. The age range of participants was also divided into two groups i.e., 20-35 and 35-50. It was hypothesized that there would be a significant relationship between social adjustment, life satisfaction, and mental health among heavy smokers. Social adjustment (Cooper & Gath, 1977), Life satisfaction scale (Mehmood, 2013), and General health questionnaire-28 (Goldberg 1978) were used to measure the social adjustment, life satisfaction and mental health among heavy smokers. Results showed positive relationship related to age and income. Further, the results showed that there is no mentaly healthy significant difference between younger adult heavy smokers and middle adult heavy smokers. Moreover, our hypotheses supported the current research model. This study provides an overview of heavy smokers' mental health as well as highlights areas where further investigation may yield benefits to mental health professionals.

Keywords: Social adjustment, life satisfaction, mental health, heavy smokers, adults, healthcare professionals

INTRODUCTION

The present study is aimed to investigate the relationship between social adjustment, life satisfaction, and mental health among heavy Smokers. Smoking is the inhalation of the smoke of burning tobacco encased in cigarettes, pipes, and cigars. Casual smoking is the act of smoking only occasionally, usually in a social situation or to relieve stress. A smoking habit is a physical addiction to tobacco products. Many health experts now regard habitual smoking as a psychological addiction, too, and one with serious health consequences. Smoking is a dangerous health problem.

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Every year, it is estimated that about six million people experience smoking-related problems in the world (Leidi, 2009).

Smoking is a practice in which a substance is burned and the resulting smoke breathed in to be tasted or inhaled. Most commonly the substance is the dried leaves of the tobacco plant which have been rolled into rice paper into a small, round cylinder called a "Cigarette". Causal smoking is the act of full smoking only occasionally, usually in a social situation or to relieve stress. This type of smoker is called chippers. Chippers are defined as individuals who smoke at least two days per week and no more than five cigarettes during the days that they do smoke (King et al., 2022). A smoking habit is a physical addiction to tobacco products. Many health experts now regard habitual smoking as a psychological addiction, too, and one with serious health consequences. Smoking is a cause of dangerous health problems. Every year, it is estimated that about six million people experience smoking-related problems in the world (Leidi, 2009). Due to smoking, many premature deaths are reported. Now-a-days smoking is one of the burning issues in the debate in the health sector. According to National Institute for Health and Care Excellence in England, the prevalence rate of smoking is 16 years and it is increased from 27 percent to 21percent (Simpson, 2010). According to some surveys, 40 percent of males and 8percent of females are regular smokers (Gunter et al., 2020). Pakistan has the highest consumption of tobacco in South Asia (David et al., 2020). Walker found that cigarette smoking causes an acute increase in resting, and energy expenditure, but the effect on energy expenditure during light physical activity is less clear. The results showed that there is a significant relationship between smoking and poor quality of life among smokers (Milic et al, 2020).

Smoking also decreases immunity and hence the ability to fight off diseases, making smokers more susceptible to opportunistic infections. Common communicable illnesses like viral flu usually get complicated in smokers due to the same reason. This is also a fact that smokers suffer from poor post-operative wound healing and an increased chance of superficial surgical site infections (Nduaguba et al. 2019). Smoking tends to increase blood cholesterol levels. Furthermore, the ratio of high-density lipoprotein (the "good" cholesterol) to low-density lipoprotein (the "bad" cholesterol) tends to be lower in smokers compared to non-smokers. Smoking also raises the levels of fibrinogen and increases platelet production Carbon monoxide binds to hemoglobin (the oxygen-carrying component in red blood cells), resulting in a much more stable complex than hemoglobin bound with oxygen or carbon dioxide—the result is permanent loss of blood cell functionality. Blood cells are naturally recycled after a certain period, allowing for the creation of new, functional erythrocytes. However, if carbon monoxide exposure reaches a certain point before it can be recycled, hypoxia (and later death) occurs. All these factors make smokers more at risk of developing various forms of arteriosclerosis. As arteriosclerosis progresses, blood flows less easily through rigid and narrowed blood vessels, making the blood more likely to form a thrombosis (clot). Sudden blockage of a blood vessel may lead to an infarction (both involved in blood clotting) which makes the blood viscous. (stroke). However, it is also worth noting that the effects of smoking on the heart may be subtler. These conditions may develop gradually given the smoking-healing cycle (the human body heals itself between periods of smoking), and therefore a smoker may develop less significant disorders such as worsening or maintenance of unpleasant dermatological conditions, e.g. eczema, due to reduced blood supply. Smoking also increases blood pressure and weakens blood vessels (Narkewiez, Kieldsen & Hedner 2005).

Tobacco smoke contains nicotine -a poisonous alkaloid- and other harmful substances like carbon monoxide, acrolein, ammonia, prussic acid, and several aldehydes and tars. Health reports giving definitive proof that cigarette smoking is a serious health hazard have been submitted from time to time by Surgeons. Findings include that a smoker has a significantly greater chance of contracting lung cancer than a nonsmoker. Cigarette smoke is composed of more than 5000 chemicals; including approximately 70 carcinogens amongst them, while nicotine has received much attention because it triggers the immune system and alters humoral and cellular immunity. In addition, cigarette smoke is a dominant risk factor for premature and accelerated peripheral, coronary and cerebral atherosclerotic vascular diseases. A one to three-fold increase in the risk of myocardial infarction has generally been noted among cigarette smokers. The mechanism by which smoking causes myocardial infarction remains vague, but cigarette smoking has been found to alter the levels of lipoproteins.

Additionally, the report also gave proof that smoking is a primary cause of chronic obstructive pulmonary disease, emphysema, heart disease, stroke and other cardiovascular diseases. Research reveals that smokers suffer more bouts of pneumonia, bronchitis, flu, and colds. Certain conditions such as asthma become much worse with smoking. A 2007 report stated that each year, about 4.9 million people worldwide die as a result of smoking. When a person smokes, a dose of nicotine reaches the brain within about ten seconds. At first, nicotine improves mood and concentration, decreases anger and stress, relaxes muscles, and reduces appetite. Regular doses of nicotine lead to changes in the brain, which then leads to nicotine withdrawal symptoms when the supply of nicotine decreases. Smoking temporarily reduces these withdrawal symptoms and can therefore reinforce the habit. It was estimated that every day, almost 39,00 adolescents under 18 years of age try their first cigarette. More than 950 of them will become daily smokers. 1 of 5 teenagers who are addicted to cigarettes, smokes 13-15 a day (Budin et al., 2019, Marsh et al., 2021).

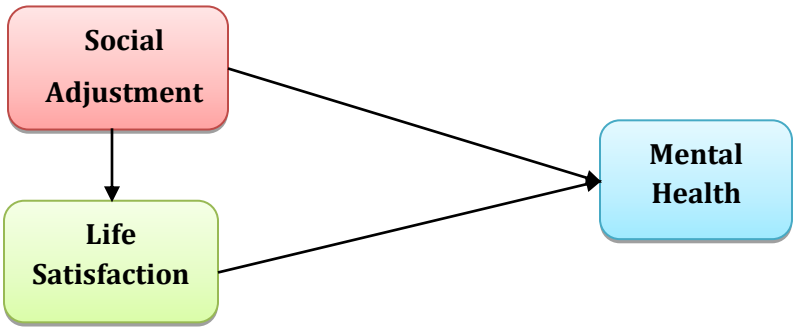
The primary pharmacological agent found in cigarettes is one of the most dangerous addictions. Habitual smokers primarily smoke to maintain a certain nicotine level and prevent nicotine withdrawal (Shiffman & Paty 2006). Nicotine is also known to be a vase constrictive substance that increases sympathetic nervous system activity (i.e., blood pressure, heart rate). Chronic stimulation from the sympathetic nervous system due to nicotine can over time lead to hypertension or cardiovascular diseases. Nicotine and the sympathetic nervous system have an intimate relationship so smoker often experiences significant increases in heart rate and blood pressure. Researchers have also investigated the influence of nicotine use and the physiological and psychological responses. Several studies examining smoking and stress-induced cardiovascular reactivity (i.e. the change in cardiovascular functioning during exposure to acute or chronic psychological stress) have demonstrated that the combination of nicotine and psychological stress can increase cardiovascular reactivity additively in cigarette smokers (Gallagher et al., 2018; Lin et al., 2020; Xue et al., 2021; Khan et al., 2022). Smoking is the main cause of preventable premature death, accounting for an estimated 6 million deaths worldwide each year (Tobacco Fact Sheet). It is also the single largest contributor to health inequalities in high-income countries, explaining an estimated 20 to 50% of the variation in the difference in life expectancy between the least and the most deprived groups (Marmot, & Wikinson, 2006).

Most people start to smoke before they show signs of depression so it is unclear whether smoking leads to depression or depression encourages people to start smoking. The most likely explanation is that there is a complex relationship between the two unipolar depression, also known as major depression, which is characterized by intense sadness or irritability, disrupted concentration, sleep, eating, and energy levels, and feelings of hopelessness and suicidal thoughts. Major depression in youth is not simply a phase of development; rather, it is a serious psychological problem that shows stability over time and can significantly interfere with children's ability to function. Depressed youth have a lowered ability to function in daily life, with 85-87percent of adolescents with depressive disorders rated as having minor impairments in functioning (Goh, 2021).

Following are the types of smokers. Chippers Smokers; those smokers who smoke less than five cigarettes per day (CPD) on 2-6 days per week and not more than 10 CPD on any given day, with some studies requiring that they have smoked at this level for at least two years (Tait, et al, 2006; Geldsetzer, et al, 2019). Light smokers; those smokers who smoke less than ten cigarettes per day regardless of several days per week (Wellman, Difranza & Wood 2006). Light and Intermittent Smokers**;** Those smokers who smoke 1-39 cigarettes per week, or an average of 10 CPD, or 1-4 grams of tobacco per day, and have never smoked daily (Edwards et al, 2022)**.** Low-level Smokers; Those smokers who smoke less than twenty cigarettes per day with CPD and less than one pack per week (Behnam, Mousavi, & Emamian, 2019). Low-rate smokers are those smokers who smoke less than five cigarettes CPD and never more than ten CPD (Zbolrndky et al, 2007). Non-daily smokers**;** those smokers who smoke less than seven cigarettes per day and may smoke less than three packs per week (Baker et al., 2022). Occasional smokers **are**those smokers who smoke less than five cigarettes per day CPD and smoke less than three times per week, usually dependent on circumstances such as partying or drinking or after meals (Biener & Albers 2004). Social smokers**;** Those smokers who smoke less than five cigarettes per day CPD and less than seven days per week in the last two years and have never exceeded that limit (Biener & Albers 2004).

Life Satisfaction is a domain of one's whole life and the dissimilar measurement of one's life. Life satisfaction is explained as one's positive estimate of his or her entire life (Diener et al., 1984; Amati et al., 2018). Schwaninger et al. (2021) reported that smoking tends to increase blood cholesterol steps. Furthermore, the ratio of high-density lipoprotein (the "good" cholesterol) to low-density lipoprotein (the "evil" cholesterol) tends to be lower in smokers compared to non-smokers. Smoking also raises the steps of fibrinogen and increases platelet production (both involved in blood clotting) which makes the blood viscous. Carbon monoxide binds to hemoglobin (the oxygen-carrying element in red blood cells), and results in a much more stable complex than hemoglobin bound with oxygen or carbon dioxide—causing permanent loss of blood cell functionality. Blood cells are naturally recycled after a certain period of moment, allowing for the creation of brand-new, functional erythrocytes. However, if carbon monoxide exposure reaches a certain point before it can be recycled, hypoxia (and later death) occurs.

Conceptual Frame Work:



Rationale of Study

Pakistan is one of the developing countries in the world in which rate of smoking is very high and it is increasing with the passage of time. So, in this scenario smokers seem to be suffering from several psychological and physiological problems. This study is conducted because it is necessary for today's society which is taken over by the curse of smoking.

This study has the following objectives: To find out relationship between social adjustment, life satisfaction and mental health among heavy smokers; To explore age differences in social adjustment, life satisfaction and mental health among heavy smokers; To explore the relationship between social adjustment, life satisfaction and mental health regarding family income.

Hypotheses

There would be a significant relationship between social adjustment, life satisfaction, and mental health among heavy smokers. There would be a significant difference between younger adults' heavy smokers and middle adults' heavy smokers in social adjustment. There would be a significant difference between younger adults' heavy smokers and middle adults' heavy smokers in life satisfaction. There would be a significant difference between younger adults' heavy smokers and middle adults' heavy smokers on General Health Questionnaire. Social adjustment, life satisfaction, and mental health would be positively correlated to family income.

MATERIALS AND METHODS

Participants

The sample of the study consisted of one hundred and twenty participants. The 120 participants were divided into two groups, i.e., younger adults and middle adults. The age range of participants was also divided into two groups, i.e., 20-35 and 35-50. One group aged 20-35 were considered younger adults while other group aged 35-50 were considered middle adults.

Research Design

Correlation and comparative group design were used in this study.

Inclusion and Exclusion Criteria

Those males who smoke 20 or more cigarettes per day were included, whereas Females were excluded.

Operational Definitions

Social Adjustment

Social Adjustment may take place by adapting the self to the environment or by changing the environment" Campbell, Psychiatric Dictionary (1996).

Life Satisfaction

Life Satisfaction is a domain of one's whole life and the different measurement of one's life. Life satisfaction is explained as one positive estimate of his all life (Diener et al., 1985).

Life satisfaction is defined as a cognitive evaluation of one's life as a whole and/or of specific life domains (Huebner et al., 2005; Myers and Diener, 1995). Measures of life satisfaction range from multi-item scales to single questions aimed at assessing global life satisfaction (Abdel-Khalek, 2006; Myers and Diener, 1995).

Mental Health

According to the World Health Organization (WHO), mental health is "a state of well-being in which the individual realizes his or her abilities, can cope with the normal stresses of life, can work productively and fruitfully, and can contribute to his or her community" (Silvana et al 2018).

RESEARCH INSTRUMENTS

Social Adjustment Scale (SAS; COOPER, OSBORN &GATH, 1977)

A self-report social adjustment scale (cooper, Osborn & Gath, 1977) is a 45 items self-report scale used to measure expressive and instrumental performance over the past two weeks in the six role areas. (1) Work, either as a paid worker, unpaid homemaker, or student. (2) Social and leisure activities. (3) Relationships with extended family. (4) Role as a marital partner. (5) Parental role and (6) Role within the family unit, including perceptions about economic functioning. The questions within each area cover four expressive and instrumental categories: Performance at expected tasks; the amount of friction with people; finer aspects of interpersonal relations; and feelings and satisfactions. Each question is rated on a five-point scale from which role areas means and an overall mean can be obtained, with higher scores denoting greater impairment. Role areas not relevant to the respondent can be skipped. Overall means are based on all items completed by the respondent. Scores for the starred questions 1,2,4 &5,9,10,11 & 12,17,18,19,20 & 21`,22,27 & 28,29,32,34 & 37,41,43,44 and 44 are reversed so responses to these questions rated 5,4,3,2,1 rather than 1,2,3,4,5. A high score on the scale indicates better social adjustment. The reliability coefficient of the scale was .99 in the current study.

Life Satisfaction Scale (MEHMOOD, 2013)

The life satisfaction scale was developed by Mehmood (2013). The scale measured life satisfaction. This scale was developed on the five-point Likert scaling method. There are 21 items on this scale. The strongly agree (SA) scored 4, and the strongly disagree (SD) scored 0. These are the negative items in the scale (4,7,9,10,11,12,18,20). These scored reverses strongly agree (SA) scored 0, strongly disagree (SD) scored 4 (Judge & Arora, 2017; Mehmood, 2013).

General Health Questionnaire –28 (GHQ) (GOLDBERG 1978)

GHQ-28 is the measure of adult mental health and is developed by Goldberg in 1978. GHQ-28 consists of 28 questions designed for evaluating general health recently. The question is divided into four 7 question groups that lead to the assessment of the following subscale; somatic symptoms, anxiety symptoms, social functioning, and depressive symptoms.

All of the questions are equally weighted on a scale of 0-3while the cut-off score is 23/24 and the final score would be 84 a global GHQ score equal to and greater than 23 signals poor general health in recent. It takes about 8 minutes to fill out the questionnaire and 3 additional minutes to score it. For the current study Urdu version of GHQ-28 translated and adapted by Riaz and Reza (1998) was used.

Procedure

A purposive sampling technique was used to select the sample. A sample of 120 smokers was selected through purposive sampling. Data was collected from the respondent participants. Data were collected from different areas of Faisalabad. Participants meeting the inclusion criteria were approached and informed consent was obtained. Urdu Versions of the scales were administered for the convenience of participants. A questionnaire holding the demographic variables and important information was filled out by the participant Smokers. Brief descriptions were given about the purpose of the data collection and participants were assured that the data collected from them will only be used for research purpose and will be kept confidential.

Statistical Analysis

A Statistical Package for Social Sciences (SPSS-24) was used for the analysis of data.

RESULTS

The present research aimed to examine social adjustment, life satisfaction, and mental health among heavy smokers. A sample consisting of (N=120) male heavy smokers was taken from different areas of Faisalabad. The sample was further divided into (n=60) younger adults and (n=60) middle adult heavy smokers. The age range for younger adults is 20-35 and for middle adults is 36-50. A purposive sampling technique was used to collect the data. In this present study, the translated Urdu version of the social adjustment Life satisfaction and General Health Questionnaire (GHQ-28) was used. SPSS-20 was used to find out the results. In the present chapter, the results of the study are given in the form of tables.

Table 1

Inter-Correlation for younger adult heavy smokers and middle adult heavy smokers on social adjustment, life satisfaction, and mental health (N=120).

Variables	GHQ	SA	LS
GHQ	1	.32**	.59**
SA		1	.45**
LS			1

**. Correlation is significant at the 0.01 level (2-tailed)

This hypothesis is supported by results that are significant at $p < 0.01$ level. It is clear from table 1 that there is a strong relationship between social adjustment, life satisfaction, and mental health among heavy smokers.

Table 2

Difference in younger adult heavy smokers and middle adults heavy smokers on social adjustment (N=120).

Group	M	SD	df	t	p-val
Younger adults (60)	112.15	14.84	118	30.056	.003
Middle adults (60)	104.32	13.18			

Note; M= mean, SD= Standard deviation, t= test value, p= significant value

Table 4.2 indicated that there is a significant difference in the mean score of younger adults (M=,112.15 SD=14.84) and middle adults (M=104.32 SD=13.18) heavy smokers on the social adjustment scale.

Table 3

The difference between younger adult heavy smokers and middle adult heavy smokers on life satisfaction (N=120).

Group	M	SD	df	t	p-val
Younger adults (60)	46.35	11.29	118	2.281	.03
Middle adults (60)	41.71	10.28			

Note; M= mean, SD= Standard deviation, t= test value, p= significant value

Table 4.3 indicated that there is a significant difference in the mean score of younger adults (M=,46.35 SD=11.29) and middle adults (M=41.71 SD=10.28) heavy smokers on the life satisfaction scale.

Table 4

Difference in younger adult heavy smokers and middle adults heavy smokers on General Health Questionnaire (N=120).

Group	M	SD	df	t	p-val
Younger adults (60)	43.25	15.99	118	1.369	.174
Middle adults (60)	39.08	17.21			

Note; M= mean, SD= Standard deviation, t= test value, p= significant value

Table 4.4 indicated that there is significant difference in the mean score of younger adults (M=,43.25 SD=15.99) and middle adults (M=39.08 SD=17.21) heavy smokers on the general health questionnaire.

DISCUSSION

The purpose of the current research was to recognize the connection between social adjustment, life satisfaction, and mental health among heavy smokers. The present study is important because it provides an opportunity to examine the relationship between social adjustment, life satisfaction, and mental health among heavy smokers. Various types of research carried out in different parts of the world related to smoking were checked for the relationship between social adjustment, life satisfaction, and mental health among heavy smokers.

The present study was conducted to examine the relationship between social adjustment, life satisfaction, and mental health among heavy smokers. This study finds out the difference between younger adult heavy smokers and middle adult heavy smokers. Total sample was 120 out of which 60 were younger adults and 60 were middle adults. A demographic sheet and valid or reliable social adjustment scale (SAS; Cooper, Osborn & Gath, 1977), Life satisfaction scale (Judge & Arora, 2017), and General Health Questionnaire-28 (GHQ) (Goldberg,1978) were used.

As Hypothesis No.1 states that "There would be a significant relationship between social adjustment, life satisfaction and mental health among heavy smokers." This hypothesis has been supported and accepted according to the results. There is a highly positive relationship between social adjustment, life satisfaction, and mental health among heavy smokers. To check the hypothesis Pearson product-moment correlation was used. Correlation results reveal that the persons who use cigarettes are well socially adjusted, they feel mentally relaxed and their relations with other people also go well. According to the results if they do not amoke, then their relations do not go well and they also do not get relaxed. Jeihooni et al (2018) conducted research where result shows there is a significant relationship between tension and smoking. Shiffman et al (2015) researched to check the social adjustment of smokers in society. Results of the study showed that people who smoke are socializing well associated with friends and acquaintances.

As hypothesis No.2 states that "There would be a significant difference between younger adults and middle adult heavy smokers in social adjustment." This hypothesis is supported by significant results. It is clear from Table 2 that there is a strong significant difference between younger adult heavy smokers and middle adult heavy smokers in social adjustment. According to the results, younger adults are more socially adjusted than middle adults. Younger adults' relations in society are better than middle adults. It is also may be the effect of age. According to the results, younger adults are well adjusted than middle adults (Von Helversen et al. 2018). Present research results also show that young people are well adjusted than older.

Similarly, hypothesis 3 states that "There would be a significant difference between younger heavy smokers and middle adult heavy smokers in life satisfaction." This hypothesis is supported by significant results. It is clear from table 3 that there is a significant difference between younger adult heavy smokers and middle adult heavy smokers in life satisfaction. According to the results, young people's life satisfaction is better than middle adult heavy smokers. At a younger age, people wanted to make relationships with others and there will be a little tension related to the family. At that stage, his needs are fulfilled by his parents. In middle age, family burdens double the younger age problems and his age level also differs at that stage (Müller-Godeffroy et al., 2009). The present research results on middle age smokers also supported these results. Barlett and Anderson (2012)

also support it. Barlett and Anderson (2012) said that there is a direct relationship between personality traits and life satisfaction among drug addicts.

While hypothesis 4 states that "Younger adults' heavy smokers will be more mentally healthy than older adult heavy smokers." This hypothesis is supported by results that are not significant. It is clear from table 4 that there is no mental difference between younger adult heavy smokers and middle adult heavy smokers. According to the results, younger adults are live in tension because at this stage sexual desire also affect and they wanted to full fill but cannot do it because of rules and regulation, society's rules and regulation, and the Islamic point of view. Other factors of life study, also affect. And at the age of middle adulthood, his sexual needs are fulfilled and he cannot take tension related to studying as compared to younger adult's age. Many other factors also affect. Lois (2011) researched to check the mental health of smokers. The results showed that those younger adults are more mentally than older but the level of psychological distress is very high in them. People in good mental health are often sad, unwell, angry, or unhappy, and this is part of a fully lived life for a human being. Despite this, mental health has been often conceptualized as having purely positive effect, marked by feelings of happiness and a sense of mastery over the environment. (Silvana et al 2018) also conducted research and its results are supportive according to the hypothesis results.

Moreover, hypothesis 5 states that "There would be a positively correlated social adjustment, life satisfaction and mental health to family income." This hypothesis is supported by results that are significant at $p < 0.01$ level. It is clear from table 5 that there is a strong significant relationship between social adjustment, life satisfaction, and mental health related to family income. According to the results, it is clear that social adjustment, life satisfaction, and mental health related to family income among younger adult heavy smokers and middle adult heavy smokers are influenced by them. Bertuccio (2011) conducted research where results show that there is a significant relationship between income and smoking. Adler, (1912) conducted a study that supports these results.

CONCLUSION

The present research was conducted to explore social adjustment, life satisfaction, and mental health among heavy smokers. Correlational and comparative group design was used in this study. The results of the study showed that there is a strong significant relationship between social adjustment, life satisfaction and mental health among heavy smokers. And social adjustment, life satisfaction and mental health are also positively correlated with income. There is a significant difference between younger adults' heavy smokers and middle adults' heavy smokers in social adjustment and life satisfaction. Furthermore, younger adults' heavy smokers are significantly more mentally healthy than older adults' heavy smokers. In the same way the results of independent sample- t-test showed that there is a significant relationship between younger adults' heavy smokers, and middle adults heavy smokers related to life satisfaction and social adjustment. Similarly, is non-significant mentally difference between younger adults' heavy smokers and middle adults' heavy smokers.

Limitations of the Study

Work situation also affects the psychological distress and health related quality of life but in this present study it was not taken into account. Sample should be included other type of smoking. Female participants were not included in the sample. Less than 20 years of age and more than 50 years of age participants were not included in the sample.

Suggestions for Future Research

Work situations should also be taken into account in future studies while measuring social adjustment, life satisfaction, and mental health among heavy smokers. In future studies, other types of smoking may also be used. Gender-wise comparisons should be made in future studies.

Implications of the Study

The present study will be used to understand the psychological impact of smoking on middle and younger age smokers. The findings of the present study will add new knowledge to health professions. Findings will have clinical significance due to their focus on psychological distress caused due to smoking. Findings will have a clinical significance due to their focus on psychological distress caused due to not only younger adult smoking but middle adults smoking as well.

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Date of Publication	August 30, 2022