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RESEARCH ARTICLE

PHYSICAL HEALTH HAZARDS AND PSYCHOLOGICAL ASPECTS OF TOBACCO SMOKING: A REVIEW UNDER THE VISION OF MODERN SCIENCE AND TRADITIONAL UNANI SYSTEM OF MEDICINE

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Abstract

Use of tobacco and health problems due to it's smoking is a major topic of concern in today's world. Tobacco use causes serious cardio-respiratory diseases which result in low life expectancy. It is found that increased mortality due to lung cancer is associated with cigarette smoking in every country. Smoking leads to cancers, pulmonary diseases, cardiac diseases and stroke. Tobacco smoking causes psychological dependence due to the nicotine present in the tobacco. This addictive behavior is due to the addictive character of nicotine and some other factors like social, personal, economic and political influences. According to Unani System of Medicine, consumption of tobacco is harmful for cardiac and mental health. Use of tobacco causes different types of respiratory disorders; it increases the production of phlegm (Balgham) in trachea, bronchus and lungs. The literature available in Unani Medicine regarding tobacco also indicates that it causes physical and mental illness such as cough, palpitation, pulmonary tuberculosis, constipation, impotence, impairment of vision, vertigo/giddiness, amnesia and insomnia etc.

Introduction:-

In this era, tobacco is one of the most widely distributed and commonly used substances. Use of tobacco and health problems due to it's smoking is a major topic of concern in today's world. There are about 300 million smokers in the world and eventually 150 million may die later in the life due to smoking.[1] Worldwide, daily 80,000 to 1,00,000 people start smoking and become addicted.[2] Smokers with frequency of smoking 20 cigarettes per day are 3-5 times more likely to die of cardiac diseases in comparison to non-smokers. There is a higher risk of ischemic heart disease, coronary artery disease and sudden cardiac death.[3] Tobacco use causes serious cardio-respiratory diseases which result in low life expectancy.[4] It is found that increased mortality due to lung cancer is associated

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with cigarette smoking in every country. Retrospective studies showed association with bronchial carcinoma with heavy smoking. In prospective studies it was confirmed that use of tobacco specifically in the form of cigarettes was associated with the risk of death from cancer of lung.[5][6][7]

There are a lot of discussions available on the topic of physical health hazards of tobacco smoking though it's psychological aspects are rarely discussed. Tobacco smoking causes psychological dependence due to the nicotine present in the tobacco. A smoker needs to regulate the level of nicotine in the body that's why a person becomes addicted. A smoker upholds his/her optimal state of well being because of smoking behavior and it's nicotinic effects.[8]

Unani system of medicine is a type of traditional medicine which deals with the different states of health and disease in the body. It promotes preventive, curative and rehabilitative treatments.[9] The principles of Unani system of medicine are based on the theory of temperament (Mizaj) and the theory of humors (Ikhlat). The true strength of Unani pathy is basically it's holistic nature, prescriptions according to the temperament and effective treatment of various diseases. Other than these principles, the theory of Asbab-e-Sitta Zarooriya (six essential factors) is also a unique feature of Unani Medicine. It plays a vital role in perseverance and maintenance of health as well as prevention of disease. These Asbab-e-Sitta Zarooriya (six essential factors) are Hawa (Air), Makool-o-Mashroob (Food & Drinks), Harkat-o-Sukoon Badni (Body Movements and Rest), Harkat-o-Sukoon Nafsani (Psychic Movements and Rest), Naum-o-Yaqza (Sleep and Wakefulness) and Ehtebas-wa-Istafragh (Retention and Evacuation). These factors keep a proper ecological balance with health and environment. Apart from the prevention of diseases, these factors instruct us to keep food water and air free from pollutions and pathogens.[10][11] Hawa (Air) is considered as the most important factor in Asbab-e-Sitta Zarooriya (six essential prerequisite). It is necessary for Ta'adeel (Rejuvenation) and Tanqiya (Evacuation/Detoxification) of the Rooh (Pneuma). There are different types of Hawa (Air) mentioned in Unani literature, from which Dukhaan/Dhuan (Smoke) is considered as polluted air which causes imbalance of the Rooh (Pneuma).[11] According to Unani System of Medicine, consumption of tobacco is harmful for cardiac and mental health. It draws adverse effects over heart and brain. It produces an imbalance in the temperament as well as it affects specifically a person with an excitable temperament. The literature available in Unani Medicine regarding tobacco indicates that it causes physical and mental illness such as cough, palpitation, pulmonary tuberculosis, constipation, impotence, impairment of vision, vertigo/giddiness, amnesia and insomnia etc.[12]

Discussion:-

In the list of tobacco consumption, smoking is considered as the most common form. When tobacco is used in smoking form, it is burned and it's vapors are inhaled or tasted. Basically, behavior of smoking is an act of inhaling smoke produced by burning of cured or dried leaves of tobacco. The patterns or types of smoking enlist cigarette, cigar, bidi, hookah, pipe, stick, kretek, roll-your-own and passive smoking.[13][14] In the mid 20th century, there came the scientific revelation regarding tobacco and after that it was considered as a health hazard. It was revealed that it is an etiological factor for cancer, various respiratory and circulatory diseases.[15] Due to the behavior of smoking, there is an increase in death rate among middle aged people in India.[16] Consumption of tobacco in the group of low economic background may increase the burden of disease. It may double the risk of nutritional, communicable and chronic diseases. These diseases among poor population have greater share of total disease burden in India.[17] Globally, use of tobacco has become one of the most major causes of deaths which are actually preventable. Global data shows 5 million deaths annually due to tobacco. This data is expected to become 10 million per year by 2025. The situation is more complicated and worse in developing countries.[18][19][20] In India, tobacco is a major cause of morbidity and mortality. There are approximately 120 million smokers in India.[21] Out of every two smokers, one dies because of a disease caused by tobacco smoking. It is said that a victim is killed by the tobacco at every six seconds. Approximately 100 million people died due to tobacco use in 20th century and currently it is causing one in ten deaths among adults.[22]

Apart from mortality, tobacco use causes many disorders and disabilities. Smoking leads to cancers, pulmonary diseases, cardiac diseases and stroke. In India, approximately half of all cancers in men are related to tobacco. 60% of tobacco smokers who are below the age of 40 years are patients of cardiac diseases. It is estimated that use of cigarette and bidi will decrease the average life of men by 6 years and women by 8 years.[19][20][22][23][24] Major health problems associated with tobacco use include cardiovascular disorders like atherosclerosis and coronary artery disease, leukemia, cancers of lungs, oral cavity, pharynx, larynx, oesophagus, stomach, pancreas, kidney and bladder. In addition, tobacco smoking also causes respiratory diseases like chronic obstructive pulmonary disease

(COPD), pneumonia and decrease lung functions. Other respiratory effects of smoking include excessive phlegm/mucous production, increased cough, wheezing, dyspnoea and other respiratory infections. There are also some reproductive problems related to tobacco use such as delayed conception, primary and secondary infertility, preterm delivery, intrauterine growth retardation (IUGR), still birth, placenta previa and abruptio placenta etc. Some other diseases including peptic ulcers, periodentitis, cataract, delayed wound healing and low bone density etc.[25]

In the 20th century, it was considered that smoking is a socially learned habit and also it's a personal choice but later nicotine's role was accepted in adoption of smoking behavior. Smokers regulate the nicotine level in the body by regulating inhalation and way of puffing. Smoking is basically a manifestation of nicotine addiction and few other associated factors. The psychological dependence of nicotine is not only depends on it's pharmacological properties but also on social, personal, economic and political influences.[26] Nicotine acts on nicotinic cholinergic receptors which are found in tobacco users. Nicotine causes psychological dependence and its addiction is found more severe and more prevalent in people with a history of depression and drug or alcohol abuse. Tobacco smoking is an efficient drug delivery system which delivers nicotine to the brain rapidly in a high concentration.[4][27] Tobacco dependence is a public health problem which causes significant mortality, morbidity and health care costs for both society and smoker. Nicotine dependence is based on three phases. Phase I includes acquisition and maintenance of nicotine-taking behavior. In this phase, nicotine via tobacco smoking produces mild pleasure, relaxation, mild euphoria, decrease fatigue and increase arousal. These effects are responsible for initiation and maintenance of tobacco smoking. Phase II is based on withdrawal symptoms after cessation of nicotine intake in neuro-adaptations of brain. Basically the withdrawal causes nicotine dependence after its chronic use. After cessation of smoking, the stressing somatic withdrawal symptoms make a smoker continue to smoke to distress those symptoms. The withdrawal symptoms which appear after cessation of smoking are anxiety, irritability and lack of concentration, depressed mood, craving, insomnia, gastro-intestinal discomfort, weight gain and bradycardia. Phase III is vulnerability to relapse. In this phase a smoker relapses to smoking after cessation. Resumption of smoking often occurs because of people, objects, places or other stimuli which a smoker has learned to consider as rewarding positive effect of smoking.[28]

According to Unani System of Medicine, tobacco has a dry and hot temperament in 2nd degree (Mizaj: Haar Yabis Darja Doum). As tobacco has hot properties in it, that's why it causes ill effects on health, body strength and special senses. Tobacco use causes weakness of brain due it's solvent (Mohallil) property which produces extra heat in the body. It also causes palpitation by increasing viscosity of blood. Thus it has bad effects on cardiac patient's health. Dried leaves of tobacco are harmful for lungs and it causes cough (Sual). Those people who have dry and hot temperament (Haar Yabis Mizaj) should avoid use of tobacco. It is also harmful for the person with predominance of heat and dryness of brain. Heavy smoking of tobacco causes indigestion, muscular weakness and dryness of throat and nasal passage. Tobacco contains a poisonous substance called nicotine, which is very toxic specially for heart. This poison slowly produces weakness of heart. It is also responsible for the development of different types of diseases.[29][30][31][32][33][34] Use of tobacco causes different types of respiratory disorders; it increases the production of phlegm (Balgham) in trachea, bronchus and lungs. Tobacco use can cause chronic inflammation of throat; and its smell (passive smoking) can trigger asthmatic attack. Use of tobacco affects sympathetic nerves and decreases its functions.[35][36][37][38]

Conclusion:-

The literatures available on tobacco smoking in modern science as well as in Traditional Unani System of Medicine suggest that it is responsible for predisposing many physical diseases and psychological disturbances. Despite knowing the ill effects of smoking, it's prevalence rate is not decreasing and smokers are continuing to smoke. This behavior is due to addictive character of nicotine and some other factors like social, personal, economic and political influences. Tobacco smoking is still an important risk behavior which can be modified for prevention of many diseases. Though anti-smoking and tobacco cessation programs are doing well but still we need much better role model monitoring, determination of influencing factors and create awareness regarding health hazards of smoking. It will help the smokers to quit smoking.

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Conflict of interest:
None.

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