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IMPACT OF TOBACCO CONSUMPTION ON MENTAL HEALTH: A SHORT REVIEW

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ABSTRACT Tobacco use is strongly associated with mental health. There always exists a link between tobacco and mood. As mood being the major component of mental wellbeing, it has the capacity to influence all our thoughts, behaviours and actions. The present study aimed at summarizing the association between tobacco consumption and progression of mental health conditions. Literature has its finding in the area which suggests that mentally ill people have more difficulty in quitting tobacco as they consume tobacco in an effort to regulate their symptoms associated with mental illness. The relation between the two is highly complex. These days tobacco cessation programmes largely focus on the general population instead of mentally ill. Hence, research is greatly needed in tobacco cessation interventions integrated towards mental health treatment. In this paper, we have also reviewed individual strategies and broader policy strategies available and highlighted research gaps.

KEYWORDS : Tobacco Addiction; Mental Health; Harm Reduction; Mental Illness

Introduction

In today's world, consuming tobacco has become a trend. Straight from the lower strata to the higher, almost all are engaged in consuming either some or the other form of tobacco. The consequence in the end is untimely death. Tobacco comes in various forms such as smoking and smokeless one. Smoking tobacco includes all products that lead to fumes when consumed. Cigarettes, hukka, weed, hash, beedi etc are some examples of it. On the other hand, gutka, khaini, paan, mishri etc. are some types of smokeless tobacco. Smokeless tobacco consumption involves chewing, brushing or keeping tobacco in one side of the mouth. In India, about 28% of the adult population consumes tobacco including smoke or smokeless one (GATS 2016-17). However, both can be equally dangerous. For non-communicable diseases like cancer, tobacco use is a major risk factor and shows interaction with other diseases like mental health conditions. Mental health has been a taboo in our Indian society since decades. A very small amount of the population understands its importance. Poor mental health is a condition that is experienced by all in some phase of life. The degree obviously varies from individual to individual. But the point where it becomes difficult to deal with, this is an alarming sign that needs to be paid attention. It is a condition in which thoughts, emotions, behaviour and actions are all impaired to an extent that it hampers our day to day living. Tobacco and mental health are correlated with each other as one leads to another. However, this can also be the opposite. One of the most possible causes of the relation between the two could be genetics which has been underlined in many studies. It plays a common factor in development of both mental illness and tobacco use. When both of these occur together it is referred to as comorbidity.

Definitely, tobacco has quite a lot of dreadful consequences. Still, it is difficult to understand the ideology as to why many people consume tobacco. The possibility of not quitting tobacco could be psychological dependence or in simple words we can say that it is extremely difficult to quit. Quitting becomes easier when stop-tobacco resources are available to a person. Still, the quitting rate remains quite less. In the year 2005, the World Health Organization (WHO) came up with a Framework on Tobacco Control which aimed at tobacco cessation facilities among all. An important question that lies here is that what about the mentally ill who are indulged into tobacco consuming activities. Mentally ill are the most vulnerable group when it comes to quitting tobacco as they are often observed to self-medicate themselves with tobacco. A study by Meltzer et al. (1995) concluded that smoking rates are twice as high among people with mental disorders. Nicotine, which is one of the major ingredients in tobacco is found to stimulate dopamine similar to the mechanism of antidepressants. So mentally ill people rely on tobacco rather than medications to deal with the symptoms. As mental health is considered of less or no importance in our society; the one undergoing issues with this particular health has to face a lot. Some people may not even speak up with the fear of being teased by people or with the fear of being rejected by society. Thus, tobacco consumption is strongly associated with social deprivation among mentally ill people (Javis & Wardie, 1999).

In a study where the prevalence of tobacco consumption was studied and compared between two populations i.e. mentally ill and the other with no psychiatric diagnoses, it was found that those with psychiatric diagnoses consume tobacco two to three times more (Prochaska, Das, & Young-Wolff, 2016). Tobacco is also known to make anxiety and depression significantly worse in a person facing mental issues. This in return makes the craving even more powerful. A study by Local Tobacco Control Profiles for England in 2014 and 2015 confirms the same.

In India 7.5% of the population suffer from mental disorders and 40% of the current tobacco users report a past or current history of mental illness. The prevalence of tobacco

dependence range is attributed to different diseases such as those suffering from schizophrenia is 58% to 92%, for patients suffering from bipolar disorder is 60% to 70% and for patients having major depression is 31% to 61% (Smith et al. 2014). In addition to this, the death rate of tobacco consumers having mental illness on average is ten to twenty years earlier than the normal population. Three are an endless number of plans and programs initiated by the government to help overcome the habit of consuming tobacco. However, quitting itself is very tedious for a normal person. Along with this when it comes to a mentally ill individual, the effects of quitting tobacco is even more devastating. Hence, the number of plans programmed for mentally ill people to quit tobacco is quite less. For safeguarding the health of people with mental illness and substance abuse disorders, California has a department known as The Substance Abuse and Mental Health Service Administration (SAMHSA). Similarly, every country has their own programme designed for such individuals but its functionality is unknown. Regular tobacco cessation programmes may not be enough for someone with poor mental health. However, counselling on the whole does help these individuals in bringing a change. A hybrid treatment plan is very beneficial in these cases as it addresses both the issues together. An appropriate plan can definitely be employed to work in such conditions. It is only then that one with poor mental health will be able to overcome the harmful habit of consuming tobacco as the relation between these two concepts is never ending.

Objective

Many evidence has clearly supported the idea that tobacco has a lot to do with mental health. In addition to this, mentally ill people also use tobacco to a great extent to deal with their symptoms. Due to heavy consumption of these toxic products, premature death and other illness remains one of the fatal consequences. In order to overcome this; many countries all over the world are taking an initiative to reduce this (Gowing et al 2015). Still the results are unsatisfactory. Hence; to reduce tobacco and its burden, review is greatly needed in this area to regulate effective intervention plans and strategies. Thus, in this paper we have reviewed the impact of tobacco on mentally ill people in association with its progression in hampering their lives.

Methodology

Literature search for this mini review in Google Scholar and PubMed was done from 2000 to 2020. Search terms included: mental illness, tobacco consumption, depression, anxiety, behavioural problems, tobacco related mortality, bipolar disorder, nicotine replacement therapy, tobacco quit line services. Results were summarized using following mental health themes: (i) Tobacco as an important and a confound factor for ill mental health (ii) Scientific link: Changes in brain for mood effect.

Results:

1. Tobacco as an important and a confound factor for ill mental health

As per the literature above, it was noticed that there exist a high number of mentally ill people who are dependent on smoke/ smokeless tobacco. The prevalence increases day by day as people diagnosed with mental illness find it easier to take tobacco products rather than medicines. Tobacco which contains nicotine affects the mood to a great extent and also enhances cognitive functioning of an individual. Moreover Stein et al. 2008 found in their study that tobacco consumers consistently reported more stress as compared to non-tobacco consumers. Also many people unfortunately hold the ideology that tobacco actually helps them deal with day to day stressors. But on the other hand, studies oppose the idea of people and proves that tobacco increases anxiety and stress. The more one consumes tobacco, the more it leads to cravings (Fu et al 2014). Also it has been reported by Prochaska et al in 2016 that people undergoing severe mental illness have a lifespan of 15 to 20 years shorter than that of a normal individual. Thus, when taken tobacco in this particular condition; the risk of death increases to double multiplied by other health conditions such as cardiovascular disease, respiratory diseases, mental illness, lung cancer and a lot more. On the whole it is proved that uncontrolled use of tobacco is dangerous. As per a study by Smith et al. (2016) which took into consideration 6,00,000 patients observed 48% deaths in individuals with bipolar disorder, 50% deaths in individuals with major depressive disorder and 53% deaths in individuals with schizophrenia. The death of these individuals was attributed to tobacco. Study done by Le Cook et al. investigated between 2004 and 2011 the percentage of self-reported smokers with or without mental health conditions. Results showed a decrease in percentage from 20% to 15% of smokers with no mental illness, but the percentage of smokers in mentally ill people remains stable at around 28–29%. Multiple factors are at play for the above trend. Firstly, the continuous use of tobacco in treating mental health issues and secondly, lack of mental health professionals in treating tobacco use (Ziedonis et al 2008). For example, in 2003 a survey conducted in psychiatric facilities in the UK on smoking bans found that staff believed that for self-medication of these patients cigarettes were important and mental health symptoms would worsen with smoking bans and increase behavioural problems (Lawn et al 2005). But literature suggests that tobacco use is not an effective method to manage stress.

2. Scientific link: Changes in brain for mood effect

Since ages the linkage between tobacco use and mental health has been studied with extensive complexity. Mood stabilizer, mood regulator, stress dealer are some of the words that have been given to tobacco. The reasons for these names are quite obvious as temporarily tobacco does the same. But when we look upon the long term effects, it does create a lot of damage.

Studies shows long term tobacco exposure in animal models imperfectly regulated the hypothalamic–pituitary–adrenal system that resulted in increased cortisol secretion and alterations in the activity of the associated monoamine neurotransmitter system, whose function is to regulate reactions to stressors (Markou et al 1998). Moreover tobacco stimulates the release of dopamine, which acts like an antidepressant. It acts as a neural 'teaching signal' which causes the brain to form an association between the current situation as perceived and the impulse to engage in whatever action immediately preceded this release. Particularly in the smoking case, this creates an urge to smoke in situations where it occurs frequently. They are also known as 'situational cravings'/ 'cue-driven smoking urges' (Shiffman, 2016). Difficulty in quitting smoking by even noon-daily smokers is attributed to this.

3. Tobacco cessation and addiction treatment

a. Drugs or alternatives

Nicotine replacement therapy (NRT) obtainable in the form of nasal spray, transdermal patch and gums provide low nicotine concentration compared to cigarettes and without exposure to toxic combustion products. However, available research data shows that different types of NRT have comparable efficacy. Nicotine withdrawal treatment of tobacco users having schizophrenia using NRT resulted in increased cooperation and decreased agitation (Allen et al. 2011).

b. Tobacco quit line services:

Tobacco quit line services are evidence based services that provide a combination of counselling and NRT. National toll

free quit line numbers provide cessation counselling at no cost (Severson et al 2000). These Quitlines services provide benefits of anonymity, convenience and zero cost which makes it very useful for people with the psychiatric diagnosis such as anxiety (Schauer et al. 2013).

c. Aversion or Behavioural therapies

Mental health professionals and psychiatrists provide training according to Public Health Service Guidelines and The American Psychiatric Association Advocate Treatment of Tobacco Use (Fiore et al. 2008). In mental health settings behavioural techniques are mostly used to manage the mood changes and other withdrawal symptoms. A health care provider assists in quitting smoking and a mental health provider reinforces the significance of the same.

d. Policies, law and regulations

Second-hand smoke exposure can be reduced by home smoking ban which increases quit attempts and decreases tobacco consumption in adults (Mills et al. 2009). Study conducted in US found that in bars and restaurants nationwide smoking bans resulted in reduced smoking among those with psychiatric conditions as well (Smith et al. 2014). Moreover further analysis found that smoking bans in the home and workplace were associated with a significantly reduced risk of developing major depression (Bandiera et al. 2010)

Conclusion:

Overall conclusion is that more efforts of policy makers, researchers and clinical providers are required to report harm of public health due to tobacco consumption. Combined, these efforts could translate into major gains in population health. Policies that reduce the use of substances are likely to reduce the prevalence of mental disorders. Treatment should be available in an integrated fashion for both mental and substance use disorders. There is a need to expand the evidence base on comorbidity, particularly in low-income countries.

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