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A REVIEW ON SMOKING CESSATION TECHNIQUES IN PATIENTS WITH MENTAL ILLNESS

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ABSTRACT

The current literature review aimed to find out effective strategies for smoking cessation in a patient with mental illness. Smoking is one of the primary causes of death worldwide. Patients with mental illness have a high rate of smoking. In General, patients with depression have a high level of nicotine addiction and after quitting smoking have more depressing moods and a greater risk than before of major depression. This review captured smoking cessation techniques from different literature which includes; Cognitive Behavioral Mood Management, Nicotine Replacement Therapy (NRT), Varenicline, and Bupropion. Additional support and a longer course of treatment may also be recommended. Readiness to quit and awareness of smoking cessation are low among smokers. Concerted efforts through awareness programs, educational programs, strict regulation policies for tobacco use, increase cost of cigarettes, and substitution of smoking with other foods and drinks were also the factor that helped them to achieve successful cessation. Among all strategies, the 5R program is the best, which focused on Relevance, Risk, Rewards, Roadblocks, and Repetition. Varenicline and Bupropion are more effective in Schizophrenics and bipolar maniac patients with nicotine replacement therapy in combination rather than alone.

Key Words: Smoking, cessation, mental illness, nicotine replacement, depression.

INTRODUCTION

Mentally ill individuals particularly schizophrenics and bipolar maniacs are at three times greater risk of smoking**[1, 2]**. Mentally ill individuals usually start smoking at an early age and their number of cigarettes are higher than mentally normal individuals **[3]**. In addition to this, smoking is a culture in psychiatric or mental health services hospitals among staff as well as patients **[1]**. When someone inhales or smokes, it takes 10

seconds for nicotine to reach the brain. At first, nicotine enhances the temper and meditation, reduces anger and stress, relaxes muscular tissues, and decreases hunger **[4]**. The standard amount of nicotine results in modification within the brain, which subsequently result in the elimination of sign and symptoms whilst the supply of nicotine decreases **[5, 6]**. Smoking quickly reduces those withdrawal signs and may consequently improve the tendency. This sequence is the reason that how maximum people who smoke come to nicotine dependence. For people with psychological illnesses, high rates of smoking are observed compared to the general population **[6]**. Currently, 1.1 billion (1 in 3 adults worldwide) are smokers **[7, 8]**. The well-known to assist with smoking cessation is pharmacotherapy plus professional behavioral aid which will increase the possibilities of effectively stopping nicotine use **[9, 10]**. Nicotine replacement therapy (NRT) is observed to be an exceptional method about achieving the goal of smoking cessation **[11]**. Nicotine replacement therapy (NRT) is considered to be a highly effective and result-oriented therapy for people who smoke with depression **[12]**. According to the study of three trials; cessation rates of 14–22% at 12 months or longer were identified, which are similar to NRT quit rates in the general public **[13, 14]**. Five types of NRTs are available that are gums, inhaler, nasal spray, tablet, and lozenge **[15, 16]**. Very limited research is conducted on smoking cessation in patients with psychological illnesses despite their encompassing a higher rate of smoking. Major mental health problems include depressive disorders and schizophrenia **[17]**. Patients with depressive disorder can benefit from the same smoking cessation therapies that are used in the general population. Smokers with depression have elevated nicotine dependence, have worse moods after quitting, and are more expected to develop major depression **[18]**. However, individuals are encouraged to quit and may gain extended self-restraint. Practical approaches for smoking cessation in this population include empirical behavioral mood management, nicotine replacement therapy, andsome drugs including varenicline and bupropion. In addition to this guidance and longer remedy may be required. Smokers with depression have to be monitored for temperament adjustment after quitting **[19]**. According to the analysis of different studies, after quitting, the event of major depression was 0–14% among all smokers and 3–24% among those with a history of depression **[4, 20]**. Preventive antidepressants can also additionally have a role in high-risk cases, especially for people with recurrent depression.

On the other hand, smoking cessation amongst schizophrenics is substantially decreased than for different psychiatric disorders **[21]**. One of the surveillances found that the occurrence of nicotine intake is much elevated in schizophrenia as compared to the overall community, people with psychiatric illnesses particularly schizophrenics consider smoking as self-medication **[22]**. The management of

nicotine preparation for individuals with schizophrenia has been related to advanced neuropsychological performance **[19]** According to a study, it would suggest that nicotine intake is increased by the typical antipsychotic agent Haloperidol. Different smoking cessation programs have been targeted toward mentally ill patients, especially people with schizophrenic disorders **[23]**. A valuable program conducted by the American Lung Association, freedom from smoking emphasizes psychotic education, optimistic corroboration, Anxiety reduction, and adjunctive use of the Nicotine transdermal patch **[22, 24]**.

The purpose of the current review was to evaluate the literature on smoking cessation approaches for the general population as well as patients with mental disorders and to figure out the best and most effective technique for cessation of smoking in patients with mental health problems **[5, 24]**. A secondary goal is to observe the alliance between psychological disorders management and smoking cessation. In summary, the current pieces of evidence suggest that nicotine agonists may have a beneficial use in the treatment of neuropsychiatric disorders **[8]**. However, many studies have been conducted, investigating the effects of nicotinic stimulation in psychiatric disorders in people who smoke who've gone through a short durationof self-restraint from smoking **[25]**.

METHODOLOGY

Data source: A review on the topic of techniques for smoking cessation in patients associated with a mental disorder was studied from the literature published in the last ten years from January 2011 to December 2020. Google Scholar, Science Direct, Springer, PubMed, and NLM (National Library of Medicine) were the databases used for collecting the published literature related to smoking cessation approaches. More than 20 articles were downloaded and 12 were rejected after a careful review of the abstract. After this screening detailed reviews were done for the remaining articles. Results were evaluated and tabulated, compared with publications of different authors and a conclusion was made. Articles were also evaluated for their quality in terms of the type of journal, where it has been published; data collection methods, statistical tests; significance values and interpretations were made.

Inclusion criteria: The inclusion criteria of article selection were the studies evaluating tobacco smoking cessation interventions with mental illness and studies included if they are randomized controlled trials (RCTs) or prospective cohorts (PCs).

Exclusion criteria: Studies evaluating tobacco smoking cessation interventions other than mental illness.

RESULTS AND DISCUSSION

According to literature survey techniques for cessation of smoking in a patient with a mental disorder, data were collected and interpretations were made. The

interpretation and effective smoking cessation techniques are listed below in table - 1.

It is observed in one study that a significant reduction in smoking was noted after one year of treatment; **[1]** that is why it seems that long-term treatment is required, which is a difficult task. A systemic literature review was conducted for smoking cessation intervention with a history of mental illness. People with a history of mental illness, smoke more than those individuals who are not associated with mental illness. Evidence-based trials suggest that populations with mental disorders are more in trouble in ceasing tobacco **[11, 26]**.

Although Varenicline is reported as an effective smoking cessation pharmacological treatment, however, it is reported to be associated with the development of suicidal thoughts in mentally ill individuals **[27]**. Nevertheless, another study reveals that the use of Varenicline and Bupropion is safe and effective in reducing the frequency of smoking in schizophrenic patients and the results are statistically significant (p=0.005) **[28]**. In addition to this, medications with NRTs are also an effective strategy for smoking cessation in schizophrenics **[28, 29]**. According to the current literature survey; it is noted that effective strategies for smoking cessation include cognitive-behavioral mood management, lifestyle counseling, antidepressants, nicotine replacement therapies, and addition and longer support **[12]**. According to a literature review cognitive behavioral management is found to be beneficial, particularly for cases with current mental illness. Another lifestyle advice can also be recommended **[30]**.

Many resources are directed towards cessation programs of smoking and these programs need to be improved to increase smoking cessation and reduce health disparity between psychiatric patients as well as the general population. To figure out the best smoking cessation therapy; literature reported that the five R's program is very effective; first depending upon the mental health of the patients and other related co-morbidities. From the literature survey it wasconcluded that rather to manage directly with medicines; it is advisable to first follow the R's program to know the mental status of the patient. The 5 R's program includes: **Relevance:** First investigate why quitting is significant to the concerned patient **[31]**.

Table 1. Smoking Cessation Techniques and Interpretation.

TECHNIQUES	INTERPRETATION
Cognitive-behavioral mood management	Most beneficial for patients with recurrent depression **[13]**

Skills, stress management, mindfulness, lifestyle counseling	miscellaneous result **[32]**
Preventive antidepressants	It May be most favorable for elevated risk cases **[13, 20]**
Current depression	Provide usual care, give treatment and stabilize depression before quitting **[33]**
Nicotine replacement therapies	Powerful **[13]**
Bupropion	Equally effective in smokers with or without depression **[25]**
Smoking Cessation Aid (Varenicline)	It is highly effective even if given as a single agent in both patients having depression or without depression **[34]**
Nortriptyline	Second-line treatment. Moreover, antidepressant action is also helpful to consider **[25]**
Intensive Care	It may be Favorable **[35, 36]**
Advanced care Managed with Quitline	Beneficial and Effective **[37]**

Risk: Figure out the minor and major consequences of nicotine use **[31]**.

Rewards: Mental peace, level of satisfaction, better health, and novelty are benefits to quit nicotine use. According to one study reward programs for smokers on quitting smoking significantly reduce their smoking habits **[38]**.

Roadblocks: Figure out the possible hurdles in quitting tobacco to the concerned case **[31]**. Similarly, goal setting and continuous monitoring of individuals also make a roadblock to smoking and this technique is also proved significant in smoking cessation **[39]**.

Repetition: To quit repeated attempts, strong follow-up is mandatory **[31]**.

CONCLUSION

Many resources are directed towards cessation programs of smoking and these programs need to be improved to increase smoking cessation; however, 5R's strategy and use of combination therapy including pharmacotherapy with NRT and behavioral therapy are more effective ways for smoking cessation in mentally ill individuals.

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