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A REVIEW ON SMOKING CESSATION TECHNIQUES IN PATIENTS WITH MENTAL ILLNESS

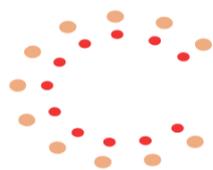
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Abstract

The aim of current literature review was to find out effective strategies of smoking cessation in patient with mental illness. Smoking is one of the primary causes of death worldwide. Patient with mental illness have high rate of smoking. In General, patient with depression have high level of nicotine addiction and subsequent to quit smoking have more depressing moods and a greater than before risk 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 longer course of treatment may also recommend. Readiness to quit and Awareness towards smoking cessation are low among the smokers. Concerted efforts through awareness programs, educational programs, strict regulation policies for tobacco use, increase cost of cigarette, substitution of smoking with other foods and drinks were also the factor that helped them to achieve successful cessation. Among all strategies the 5R's program is the best, which focused on Relevance, Risk, Rewards, Roadblocks and Repetition. Varenicline and Bupropion are more effective

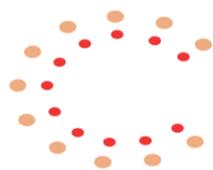


in Schizophrenics and bipolar maniac patients with nicotine replacement therapy in combination rather than alone.

Key Words: Strategies, smoking, cessation, mental illness, nicotine replacement, therapy, depression, relevance, risk, rewards.

Introduction

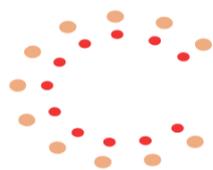
Mentally ill individuals particularly schizophrenics and bipolar maniacs are at three times greater risk of smoking (1, 2). Mentally ill individuals usually start smoking in early age and their number of cigarettes is higher than mentally normal individuals (3). In addition to this smoking is a culture in psychiatric or mental health services hospitals in staff as well as patients (4). When someone inhales or smokes, it takes 10 second for nicotine to reach the brain (5). At first, nicotine enhances the temper and meditation, reduces anger and stress, relaxes muscular tissues and decreases hunger.(5) Standard amount of nicotine results into modification within the brain, which subsequently results in elimination of sign and symptoms whilst the supply of nicotine decreases (6, 7). 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 dependent. For people with psychological illness, high rates of smoking are observed compared to general population.(7) Currently 1.1 billion (1 in 3 adults worldwide) are smokers (8, 9). The well-known to assist with smoking cessation is pharmacotherapy plus professional behavioral aid which will increase the possibilities of effectively stopping nicotine use (10, 11). Nicotine replacement therapy (NRT) is observed to be the exceptional method in relation to achieve goal of smoking cessation (12). NRT is considered to be highly effective and result oriented therapy in people who smoke with



depression (13). According to the study of three trials; cessation rates of 14–22% at 12 months or longer were identified, that are similar to NRT quit rates in the general public (14, 15). Five types of NRT are available that are gums, inhaler, nasal spray, tablet and lozenges (16, 17).

Very limited research is conducted on smoking cessation in patients with psychological illness despite they encompass higher rate of smoking. Major mental health problems include depressive disorders and schizophrenia (18). Patient 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 mood after quitting, and are more expected to develop major depression (19). 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, and some drugs include 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 (20). 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 (5, 21). 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 are substantially decreased than for different psychiatric disorders (22). One of the surveillance found that the occurrence of nicotine intake is much elevated in schizophrenia as compare to overall community, people with psychiatric illness particularly schizophrenics consider smoking as a self-medication (23). The management of nicotine preparation to individuals with schizophrenia has been related to

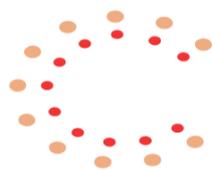


advanced neuropsychological performance (20). According to study, it would suggest that nicotine intake is increased by typical antipsychotic agent Haloperidol. Few smoking cessation programs have been targeted towards mentally ill patients, especially people with schizophrenic disorders (24). A valuable program conducted by American Lung Association, freedom for smoking emphasizing psychotic education, optimistic corroboration, Anxiety reduction and adjunctive use of the Nicotine transdermal patch (23, 25).

The purpose of current review was to evaluate the literature of smoking cessation approaches for 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 (6, 25). A secondary goal is to observe the alliance among psychological disorders management and smoking cessation. In summary the current evidences suggest that nicotine agonists may have a beneficial use for the treatment of neuropsychiatric disorders (9). 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 duration of self-restraint from smoking (27).

Methodology

Data source: Review on the topic of techniques for smoking cessation in patients associated with mental disorder was studied from the literature published in 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 with smoking cessation approaches. More than 20 articles were downloaded, 12 were rejected after careful review of abstract. After this screening detailed review were done for



remaining articles. Results were evaluated and tabulated, compared with publications of different authors and conclusion was made. Articles were also evaluated for their quality in terms of type of journal, where it has been published; data collection methods, statistical tests; significance values and interpretations were made.

Inclusion criteria: 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 (RCT's) or prospective cohort (PCs).

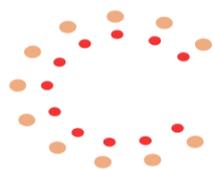
Exclusion criteria: Studies evaluating tobacco smoking cessation interventions other than mental illness.

Results and discussion

According to literature survey techniques for cessation of smoking in patient with mental disorder, data were collected and interpretations were made. The interpretation and effective smoking cessation techniques are listed below in table - 1.

Table - 1: Smoking cessation techniques and interpretation.

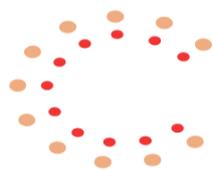
TECHNIQUES	INTERPRETATION
Cognitive behavioral mood management	Most beneficial for patients with recurrent depression(14)
skills, stress management, mindfulness, lifestyle counseling	miscellaneous result(26)
Preventive antidepressants	May be most favorable for elevated risk cases (14, 21)



Current depression	Provide usual care, give treatment and stabilize depression before quitting (27)
Nicotine replacement therapies	Powerful (14)
Bupropion	Equally effective in smoker with or without depression(28)
Smoking Cessation Aid (Varenicline)	It is highly effective even if given as single agent in both patient having depression or without depression(29)
Nortriptyline	Second line treatment. Moreover, antidepressant action is also helpful to consider(28)
Intensive Care	May be Favorable(30, 31)
Advanced care Managed with Quitline	Beneficial and Effective(32)

It is observed in one study that 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 conducted for smoking cessation intervention with history of mental illness. People with the history of mental illness, smoke more as those individuals who are not associated with mental illness. Evidence based trial suggest that population with mental disorder are more difficult for ceasing tobacco (12, 33).

Although Varenicilne is reported as an effective smoking cessation pharmacological treatment, however, it is reported to be associated with development of suicidal thoughts in mentally ill individuals (34). However, another study reveals that use of Vareniciline and Bupropion are safe and effective in reducing frequency of smoking in schizophrenic patients and results are statistically significant ($p=0.005$) (35). In addition to this, medications with NRT are also effective strategy for smoking cessation in schizophrenics (35, 36). According to



current literature survey it is noted that effective strategies for smoking cessation which includes cognitive behavioral mood management, life style counseling, antidepressants, nicotine replacement therapies in addition to a longer support (13). According to literature review cognitive behavioral management found to be beneficial particularly for cases with current mental illness. Other life style advice can also be recommended (37).

Many resources are directed towards cessation programs of smoking and these programs need to be improved in order to increase smoking cessation and reduce health disparity between psychiatric patient as well as general population. To figure out the best smoking cessation therapy, a literature reported that five R's program is very effective to consider first depending upon the mental health of the patients and other related co-morbidities. From the literature survey it was concluded that rather to manage directly with medicines, it is advisable to first follow the R's program to know the mental status of patient (38). The 5 R's program includes:

Relevance: First investigate that why the quitting is significant to concern patient (38).

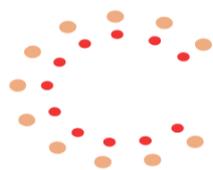
Risk: Figure out the minor and major consequences of nicotine use (38).

Rewards: Mental peace, level of satisfaction, better health, novelty are benefits to quit nicotine use. According to one study reward program for smokers on quitting smoking significantly reduce the smoking habits (39).

Roadblocks: Figure out the possible hurdles in quitting tobacco to the concern case (38).

Similarly goal setting and continuous monitoring of individuals also make a roadblock for smoking and this technique is also proved significant in smoking cessation (40).

Repetition: To quit repeated attempts, strong follow up is mandatory (38).

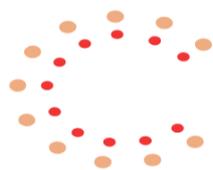


Conclusion

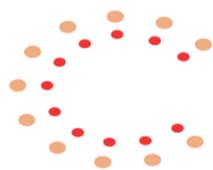
Many resources are directed towards cessation programs of smoking and these programs need to be improved in order to increase smoking cessation, however, 5R's strategy and use of combination therapy including pharmacotherapy with NRT and behavioral therapy are more effective ways for smoking cessation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

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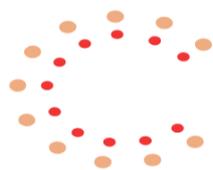
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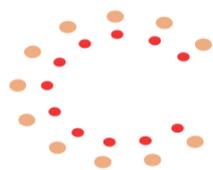
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