Literature Review

A major issue with mental health patients that is often improperly acknowledged is tobacco and/or drug addiction. The rate of cigarette smoking is much higher among people with severe mental illnesses than that of the general populace [3]; 45%–90% in the severely mentally ill (SMI) as opposed to only 20% in the general populace [2]. According to Dr. Ferron "approximately three-quarters of people with severe mental illnesses smoke cigarettes" [3]. Bridget Grant from the National Institutes of Health conducted a study to view the correlation between SMI (defined as DSM-IV Axis I and II disorders) and nicotine addiction. In an assessment of 43,093 subjects through face-to-face interviews, Grant determined that individuals with comorbid addiction and mental illness consume a large percentage of the total cigarettes consumed by the smoking population [5]. This statistics shows that cigarette addiction is not only more prevalent in the SMI but it is also a more serious problem in this group.

Individuals who are addicted to nicotine and suffer from SMI have more severe addiction. Individuals with SMI inhale more deeply per puff causing particularly harmful effects [3]. The cumulative effects of this severe smoking behavior cause death 25 years earlier in individuals with SMI (versus 14 years earlier in smokers in the general population) mostly due to cardiovascular diseases (generally caused by smoking) [4]. Individuals with Schizophrenia, a well studied SMI, have particular difficulty managing smoking. In fact, about 75% of people with schizophrenia smoke cigarettes.

Schizophrenia will be particularly focused on in this project because of the depth of research on this disease and because of the high overlap with nicotine addition. Schizophrenia is a major psychiatric disorder characterized by several breakdowns in normal brain function. These breakdowns are classified into positive and negative symptoms. Positive symptoms refer to symptoms that are not often experienced by persons without Schizophrenia. Positive symptoms include hallucinations both auditory and visual (though not very common), delusions and distinctive disorderly actions. Typical negative symptoms (those symptoms that are deficits of normal function) include lack of emotion, poverty of speech, lack of desire to form relations and inability to

experience pleasure. Cognitive deficits are particularly distinctive of Schizophrenia these include disorganized speech and grossly disorganized behavior.

Smoking cigarettes is extremely harmful and causes 87 % of lung cancer deaths, and causes other forms of cancers and health problems, including lung disease, heart and blood vessel disease, stroke and cataracts (8). Higher rates of smoking in mentally ill people lead to particularly high rates of diseases caused by smoking, resulting in shorter life expectancy in this population (8). There is little doubt that smoking has many adverse impacts on one's health and that this problem is particularly prevalent in mentally ill people.

Quitting smoking is very difficult due to the strong psychological and physical additions this habit creates. In the population of smokers who do not quit, nearly half will die of smoking-related problems. After quitting smoking, circulation begins to improve, and blood pressure starts to return to a normal, lower state. Short-term problems such as anxiety or irritability can occur when one tries to quit smoking (8). It is common for smokers to attempt to quit more than once and often to seek aid in the form of professional counseling and quitting programs because of the level of addiction smoking creates. The difficulty of quitting can be exacerbated by mentally illness.

Meanwhile, Dr. Ferron conducted an 11-year study in which followed 174 individuals with Schizophrenia and co-occurring substance abuse issues. 89% were smokers at the initiation of the study and 11 years later only 17% were not smoking. It is interesting to note that the sample did not use evidence proved methods to help quit including nicotine replacement and bupropion (3). This suggests that these treatments are inaccessible or unwelcome to the SMI (at least in individuals with co-occurring substance abuse problems).

Since smokers with severe mental illnesses often do not use traditional additional resources (to quit smoking), additional help and guidance may be necessary to aid these patients in quitting process. It has been determined that this disconnect between SMI smokers and traditional quit smoking resources is due to lack of interest (6,7), an inability to access resources (9) or other unknown reasons. Research shows that a tailored program for the mentally ill (designed and tested with the needs of the SMI in mind) struggling with addiction can improve the odds for individuals trying to quit (1,2).

In order to develop additional quitting resources, one needs to understand which resources are not used and why. Dr. Brunette also conducted survey of websites dedicated to providing help quitting smoking (1). A team of five experts measured the usefulness (based on content) and usability of the first four hits from a Google search for quitting smoking. These sites were then presented to 16 SMI smokers who were observed and interviewed on the experience. A website that was navigable by the subjects was rated as lacking in content by the experts. One site that was rated highly by the experts in both categories was inaccessible to the subjects because they could not navigate the site to find information the experts had deemed essential in quit attempts. These results demonstrate that the SMI smokers may not take advantage of quitting resources because they cannot access them. In addition, it shows that what may seem accessible to experts is not necessarily accessible for the SMI smokers.

The prevalence of smoking in SMI smokers in conjunction with the inaccessibility of resources to this population calls for a more tailored quitting system. This system should be built from the results of the previous studies; e.g., Dr. Brunette's computer cessation aid. The system would be designed with information about how SMI individuals interpret information and be targeted toward reaching this under supported audience. The final goal would be to have a comprehensive program that assists SMI smokers in quitting ideally through constant (24 hours a day) monitoring and accessible information. A large gap in the research on this topic is why SMI people, in particular, turn to smoking and often develop addictions more than other members of the general populace. Several studies found that SMI people can use structured computer programs to aid in quitting process (4). Additional research should be done to evaluate the usefulness of this type of additional treatment specific to the SMI smokers to help with quit smoking.

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