



Research Article

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Attitudes of Healthcare Professionals Toward Smoking Cessation Among Inpatients

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Abstract

It has been well established that a cultural shift has taken place in the general population toward decreased smoking rates due to the high morbidity and mortality rates associated with cigarette smoking. Conversely, a culture of smoking has remained in inpatient psychiatric facilities, where smoking rates remain high among a vulnerable population. Considering this disparity, it would seem that healthcare professionals are not prioritizing smoking cessation in inpatient facilities. However, there is a lack of research on their attitudes toward smoking cessation among inpatients. This quantitative study seeks to illuminate and better understand the need for smoking cessation and the lack of action in this population. The proposed sample of healthcare professionals working in inpatient psychiatric facilities was asked to complete a demographic questionnaire, followed by two surveys to evaluate their attitudes and highlight perceived barriers, including Attitudes Toward Smoking Cessation Interventions (ASCI) and the Maslach Burnout Inventory (MBI). The study found that neither a higher number of years in practice nor high burnout rates were correlated with more perceived barriers to implementing smoking cessation interventions. Nevertheless, this study found a significant correlation between healthcare workers' perceived lack of resources, including a preference for more smoking cessation training, as a primary barrier to implementing smoking cessation interventions. The results indicate that healthcare professionals working in psychiatric inpatient settings perceive insufficient facility resources, even if patient motivation to quit smoking is perceived, which is likely hindering their ability to provide effective means of intervention. It appears that the successful implementation of smoking cessation interventions requires inpatient facilities to first recognize the need for resources and provide means of intervention in order for healthcare workers to access and apply appropriate treatment methods.

Keywords: Smoking cessation, Nicotine addiction, Inpatient psychiatric facilities, Healthcare professionals, Attitudes towards smoking, Barriers to interventions, Quantitative study, Maslach Burnout Inventory (MBI), Attitudes Toward Smoking Cessation Interventions (ASCI), Patient motivation

Abbreviations: SAMHSA: Substance Abuse and Mental Health Services Administration; APA: American Psychiatric Association; WHO: The World Health Organization; CDC: Centers for Disease Control and Prevention; MDD: Major Depressive Disorder; ASCI: Attitudes Toward Smoking Cessation Interventions; MBI: The Maslach Burnout Inventory

Introduction

Current smoking rates in the United States have declined from 20.9% of adults in 2005 to 14% of adults in 2019, and the number of ever-smokers, or long-time smokers, who have quit has also increased [1]. In contrast, the rate of smoking among psychiatric inpatients is higher in comparison to community patients, as approximately 40% of all cigarettes produced in the United States are smoked by individuals with behavioral health conditions [2,3].

Additionally, it was reported that 49% of individuals with severe mental illnesses used tobacco in the previous year, according

to the Substance Abuse and Mental Health Services Administration (SAMHSA) [4]. The American Psychiatric Association (APA) defines smoking cessation treatment as interventions to help people quit smoking, which may involve behavioral techniques, such as positive reinforcement or incentives [5]. The World Health Organization (WHO) reported that only about 4% of attempts at quitting will succeed without cessation support [5]. Within the psychiatric population, individuals with a psychiatric disorder and co-morbid nicotine dependence make up about 7% of the United States population, but they smoke approximately 34% of the nation's cigarettes [2].



It has been estimated that tobacco use causes about 6 million deaths worldwide every year [7]. Cigarette smoking is the leading cause of preventable deaths in the United States, and cigarette use among those who have a mental illness remains high [8]. Despite the high smoking morbidity and mortality rates, approximately 45 million Americans continue to smoke cigarettes [9]. Research highlights the finding that individuals with a mental illness are two to three times more likely to smoke than the general population and at a higher frequency than those who do not have a mental illness [10-13].

People with mental health problems account for approximately 25% of the population in the United States, although they purchase and consume 40% of the nation's cigarettes [13]. The financial implications of smoking are also more prevalent in this population, as individuals with mental illness spend up to 40% of their income on cigarettes [2]. Currently, the Centers for Disease Control and Prevention (CDC) [10] claims that cigarette smoking is the cause of over 480,000 deaths annually in the United States and that over 16 million Americans suffer from illnesses associated with smoking, which is a risk factor for serious medical conditions such as cancer, respiratory diseases, and heart disease [3,14].

In a 2017 study about tobacco use, approximately 50% of individuals with a serious mental illness used tobacco within the previous year. Even though those with behavioral health issues represent approximately one-quarter of the United States adult population, they comprise approximately 40% of cigarette smokers [15,16]. Regarding individuals with Major Depressive Disorder (MDD), higher than average rates exist among smokers, especially for those who are nicotine dependent [2,17]. For psychiatric patients, smoking rates among individuals with depressive and anxiety disorders range from approximately 40–50%, compared to 70–90% among those with chronic schizophrenia. Indeed, individuals with schizophrenia are three times more likely to smoke cigarettes than patients with other psychiatric disorders, including depression, anxiety, personality, and adjustment disorders [2,18,19]. For individuals with schizophrenia, various explanations have been proposed for this increase in tobacco use, ranging from a form of self-medication to relieving negative or cognitive symptoms of the illness, as well as medication side effects.

In certain inpatient settings, smoking is a way to cope as it can be a form of self-medication and may alleviate social inhibitions or boredom [14,18]. These potential benefits of tobacco use may partially account for the reluctance, on behalf of clinicians, to initiate nicotine dependence interventions or treatments among inpatients. The potential benefits may also justify the notion that smoking may be a patient's only pleasure. Therefore, smoking seems to accompany stress reduction or enable relaxation [20-22]. This feeling of pleasure seems to contribute to mental health workers' hesitance to prohibit the activity, as these benefits are viewed as an important aspect of their overall treatment, as it is thought to be a coping mechanism during stress and enable relaxation [14,18]. Mental health workers' ambivalence to better control this activity

may be contributing to a culture of enabling smoking within inpatient facilities.

Historically, tobacco use has served an essential role in psychiatric wards since smoking has been a primary agent in prosocial behavior. For instance, Peele [23] found that up to 80% of patient interactions involved smoking as the focus, which partially accounted for the increase in smoking in this population. Smoking may serve as a coping mechanism for these individuals, but it negatively impacts their physical and psychological health. Therefore, cigarette smoking in inpatient settings should be more closely examined [24,25]. This need is especially true for long-term patients who are more severely mentally ill, as smoking may serve different purposes than the general population. Nonetheless, inpatients' motivation to quit smoking is similar compared to the motivation of the general population [26,14,27]. In a recent clinical trial, increased motivation and engagement over a brief period accompanied abstinence from smoking, so a likely correlation exists between an individual's motivation to change and their potential smoking cessation success [28].

The Substance Abuse and Mental Health Services Administration (SAMHSA) indicated that most behavioral health facilities do not tend to focus on the facilitation of tobacco cessation, and, generally, smoking is often a neglected area of treatment, even though a high proportion of patients in this setting have expressed a desire to quit smoking in the future [14,29]. Even though staff at psychiatric facilities do not typically prioritize this desire or view it as their job to help patients abstain from smoking, the APA [4] encourages clinicians to assess the smoking status of patients, including the individuals' level of nicotine dependence, their readiness to quit, and their previous quitting history [30].

Prochaska [31] emphasized the importance of assessing an individual's willingness to quit smoking over the next 30 days since there are health benefits to quitting for 30 days. Additionally, in a case-control study, *Turan, et al.*, [32] determined that smoking is associated with increased 30-day mortality and considerable postoperative complications. Moreover, the latter lent support to the need for more preoperative smoking cessation programs at the facility level [32].

At times, smoking has been encouraged in mental health settings. In certain cases, clinicians have smoked with patients to build rapport or strengthen the therapeutic relationship [27]. However, these clinicians have not fully explored opportunities to assist psychiatric patients in smoking cessation attempts [2,27]. Psychiatric patients only receive smoking cessation counseling in about 12% of psychiatric visits, compared to 38% of primary-care contacts [2,33]. Furthermore, the APA guidelines for managing nicotine withdrawal emphasize how staff attitudes are considered a barrier to helping inpatients stop smoking [34,2]. Conversely, an inpatient stay is considered an opportune time to offer smoking cessation interventions [35,14]. Smoking alongside the patient may strengthen the relationship between the clinician and the patient. However, the general hesitation to decrease tobacco use is partly due to concerns

that psychiatric symptoms will increase if patients quit. This concern remains despite the treatment of tobacco dependence being an effective intervention in patient prognosis across the severely mentally ill [36,14,27]. Moreover, cigarette smoking may be used as a reinforcer in psychiatric settings for prosocial behavior.

Irrespective of the high comorbidity and mortality rates associated with tobacco smoking in the general population, smoking cessation has been underexamined in psychiatric inpatient settings, and a higher rate of smoking among individuals with behavioral health issues has remained [37,14,38]. This result may be due to a reluctance to take action related to inpatient smoking prevention and treatment despite the decline of smoking rates in the general population as a result of increased communal efforts to reduce smoking.

Healthcare workers play an important role in helping maintain their patients' well-being, which may extend to the implementation of smoking cessation interventions. As such, it is important to consider the former groups' experience and well-being, including their years in practice and their experience of burnout. A survey among hospital-based healthcare providers found that age and years of experience did not significantly influence the likelihood of healthcare providers advising on smoking cessation. Instead, factors such as the type of healthcare professional (e.g., physicians versus nurses) and their department had a more pronounced impact on their attitudes toward smoking cessation [39].

Research indicates that burnout is likely experienced throughout healthcare workers' careers. Indeed, 21–67% of mental health workers appear to experience high levels of burnout [40,41]. This experience of burnout has the potential to negatively affect the physical and mental health of the individual and may also impact organizations and recipients of services [40]. Healthcare professionals providing services to patients with psychiatric diagnoses likely experience higher levels of burnout than other healthcare professionals as a result of unique job demands [42].

Burnout may significantly impact healthcare workers' attitudes toward patient smoking cessation, as it may result in emotional exhaustion, depersonalization, and a decreased sense of personal accomplishment [43,42]. These outcomes often result in healthcare workers feeling less motivated and engaged in their work, which can diminish their enthusiasm for providing smoking cessation support to patients. A study by *Montgomery, et al.*, [44] suggested that burnout reduces healthcare workers' ability to perform effectively and leads to a focus on high-priority tasks while neglecting secondary ones, such as smoking cessation counseling.

Problem Statement

The SAMHSA [29], the APA [5], and the WHO [6] have issued policies in support of smoking cessation in the psychiatric inpatient population. However, the literature reflects a lack of change or action on behalf of healthcare workers to implement smoking cessation interventions. Furthermore, smoking rates have remained high in this population despite these organizations' explicit endorse-

ment of such treatments. While smoking rates have decreased in the general population, smoking continues to be a prominent issue in psychiatric inpatient facilities due to inpatient healthcare system oversight and healthcare workers' perpetual participation in a culture of smoking.

Smoking cessation should be a primary goal of treatment planning in the latter population. However, there seems to be resistance on behalf of healthcare systems to prioritize smoking cessation in inpatient settings. Despite the prevalence of smoking-related illnesses and high mortality rates among smokers, healthcare workers in inpatient psychiatric facilities seem to neglect the promotion of smoke-free environments and, instead, appear to reinforce smoking-related behaviors. This issue seems to elicit a cause for concern, especially since the culture of smoking in the general population appears to reflect the discouragement of smoking-related behaviors.

A general cultural consensus exists among public culture and the medical community at large about smoking being a detrimental behavior. Despite the latter, the facilities responsible for the health and well-being of a dependent and vulnerable population have yet to address inpatient smoking habits. Instead, they enable and perhaps foster a smoking-positive culture. Additionally, healthcare workers' apprehensiveness to implement smoking cessation interventions may be due to burnout. However, research suggests that adequate organizational support and resources may mitigate the effects of burnout and improve healthcare workers' attitudes toward patient smoking cessation [45]. The research of *Pipe, et al.*, [45] emphasized the role of organized, systemic approaches in improving smoking cessation outcomes in healthcare settings. Furthermore, it would seem that organizations are responsible for initiating and facilitating smoking cessation support, including the promotion of decreased smoking rates and addressing related healthcare worker apprehensiveness in inpatient psychiatric facilities. Therefore, the onus is first on inpatient organizations to initiate change, followed by healthcare workers in inpatient settings, to protect and promote the health and mental wellness of the vulnerable population they serve.

Additionally, inpatient settings can offer more secure and timely avenues to quit smoking. Previous programs aimed at quitting have been effective for residents and cost-effective for the facilities [14]. It has been well established that the primary focus of inpatient psychiatric facilities is often on addressing acute mental health issues rather than physical health concerns like smoking cessation. However, smoking cessation has the potential to improve well-being, treatment prognosis, and mental health outcomes by decreasing symptoms of depression and anxiety. Additionally, decreasing smoking rates in inpatient facilities has the potential to save lives, improve patients' overall quality of life, decrease health risks, and be a cost-effective mode of treatment.

The previous literature suggests that an inpatient residency on a smoke-free unit has the potential to offer secure and efficacious opportunities to abstain from smoking, learn more about the var-

ious related benefits, or make an attempt to quit [14]. Therefore, the clinical benefits of the current study can serve as supporting evidence for including smoking cessation in treatment planning within inpatient settings. Not all inpatient facilities are smoke-free. Therefore, the results from the current study could encourage the development of common, effective strategies to implement smoking cessation interventions within this population to help individuals with severe mental illnesses quit smoking.

Despite the treatment benefits of smoking cessation, psychiatrists only rarely discuss or document patient tobacco use or nicotine dependence in inpatient settings [46,47]. Moreover, attitudes of healthcare professionals toward smoking cessation among inpatients were more closely examined in the current study, particularly because smoking cessation is a beneficial part of treatment prognosis. Since smoking cessation in inpatient settings has been under-researched, the attitudes of healthcare professionals toward smoking cessation were the main focus of the current study [29].

The APA [5] claimed that inpatient facilities have the potential to be an ideal setting for encouraging nicotine dependence treatment, which may be due to the presence of co-occurring health issues or comorbid medical conditions that may be negatively impacted by smoking. Frequent exposure to medical staff and an environment in which smoking cues are typically presented also make treatment in inpatient facilities an ideal setting. The current study sought a better understanding of the attitudes of healthcare professionals toward smoking cessation among inpatients so that future smoking cessation interventions, or treatments, can be more effectively integrated into the standard of care.

Whether inpatients are voluntarily or involuntarily admitted to inpatient psychiatric facilities, their personal and/or legal autonomy can be compromised, which requires healthcare workers and service providers to consider inpatients' needs and quality of life. If the latter is neglected, inpatients may not be able to advocate for themselves or execute authority over their own lives, so their voices are likely silenced with their unmet needs.

The health consequences of cigarette smoking are well known. Nevertheless, a gap in the literature exists on smoking cessation interventions in inpatient facilities. A 2018 systematic review of clinician-reported barriers to delivering smoking cessation interventions in inpatient settings highlights the impediments, attitudes, and beliefs that often serve as barriers. Barriers ranged from administrative issues and a lack of resources to clinician-ingrained beliefs, patient resistance, and smoking perceived as a coping mechanism [48].

The clinical implications of better understanding healthcare professionals' attitudes toward smoking cessation programs in inpatient facilities extend to addressing these attitudes in multidisciplinary settings and attempting to decrease smoking rates through additional training. This approach can potentially improve the allocation of resources to deliver smoking cessation interventions to inpatients more frequently and subsequently improve treatment prognosis by minimizing tobacco-related diseases.

Considering the barriers to implementing smoking cessation interventions, according to the WHO [7], smoking remains the leading cause of preventable death, with 4.9 million deaths annually. It was the interest of the researcher to further understand healthcare workers' attitudes toward smoking cessation among psychiatric inpatients, which presents additional barriers to providing smoking cessation interventions to inpatients.

The primary aim of the study was to influence current research by increasing awareness of healthcare professionals' attitudes toward smoking cessation in psychiatric inpatient settings. The researcher intended to influence current efforts to help reduce smoking in this population, particularly among those with serious mental illnesses. Measures evaluating efforts related to implementing smoking cessation interventions on adult smokers in inpatient psychiatric facilities are important factors to consider [29,49]. The researcher hoped the present study would contribute to the current literature for offering smoking cessation support as part of comprehensive treatment plans when appropriate. Hence, this researcher aimed to increase inpatient healthcare workers' awareness of the importance of addressing smoking cessation and illuminate the significant disparity between the need for smoking cessation interventions and the lack of action, especially since the cultural shift toward decreased smoking rates has been evident for years in the general population.

Purpose of the Study

The previous literature highlights the prevalence of cigarette smoking in inpatient settings. However, there seems to be a lack of access to smoking cessation treatment programs, even if patients are motivated to quit. The purpose of the current study was to evaluate the role of healthcare professionals' attitudes toward smoking cessation among inpatients. The overall effect of these attitudes has been under-analyzed. Therefore, this study aimed to add to the literature and support healthcare workers in implementing smoking cessation interventions among inpatients.

The researcher hoped that the clinical implications of this study (i.e., a better understanding of healthcare workers' attitudes toward smoking cessation) would ultimately illuminate the discrepancy between need and action in inpatient settings and influence the implementation of smoking cessation interventions. The latter insight has the potential to decrease adverse health consequences for inpatients with mental health illness, the associated mortality and morbidity rates, depression, anxiety, and stress rates. The clinical implications of better understanding healthcare workers' attitudes toward smoking cessation among inpatients could extend to a decrease in smoking behavior and associated symptomology in the future by influencing healthcare worker training and support.

The purpose of the study aimed to expand the previous literature by examining healthcare workers' reported barriers to delivering smoking cessation interventions in inpatient care facilities and bring further awareness to similar research, especially since smoking cessation may mitigate health risks and produce better psychological outcomes. Studying these variables contributed to current

literature related to reducing cigarette smoking among psychiatric residents by providing data reinforcing previous claims that smoking cessation should be an important part of inpatient treatment planning.

Methods

Participants

The total sample for the present analysis included 30 healthcare workers who provided services to inpatients. Recruitment flyers were advertised online to healthcare professionals and other allied healthcare professionals. The inclusion criteria were included on the recruitment flyer. The flyer was posted on Reddit and Facebook's public access forums. Recruitment flyers featured a link that automatically redirected respondents to the survey on SurveyMonkey. Specific groups used for recruitment included the following: physicians, internists, physician assistants, nurses, physical therapists, psychologists, counselors, and occupational therapists. Interested participants were directed to the survey link and screened for study eligibility before obtaining consent. Confidentiality was maintained as the study measures were anonymous; no names were documented.

Eligibility requirements were determined via a screening questionnaire, and only eligible participants were prompted to complete an informed consent form. The eligibility of participants was determined by their place of work, personal demographics, and patient smoking status. Upon completion of the informed consent form, eligible participants were routed to and completed the demographic questionnaire followed by the following self-report measures on SurveyMonkey: the ASCI and the MBI. The inclusion criteria in the current study included the following: healthcare professionals who worked in an inpatient setting or a short/long-term care facility, who provided care to cigarette smokers with a psychiatric diagnosis, and who were 18 years or older. The exclusion criteria included the following: healthcare professionals who provided care to psychiatric patients in outpatient facilities, who provided care to non-smokers, or who were under the age of 18.

Procedures

Healthcare workers were recruited on online platforms (i.e., Facebook and Reddit) via a recruitment flyer. Interested participants were directed to a SurveyMonkey link (via a QR code featured on the recruitment flyer), which routed them to a screening questionnaire. The screening questionnaire contained only questions regarding the inclusion/exclusion criteria for participation in the study. Participants who answered "yes" to all of the questions on the screening questionnaire were eligible to participate in the study and were then routed to the informed consent form. Upon completion of the informed consent form, only eligible individuals were routed to and completed the demographic questionnaire followed by the following self-report measures on SurveyMonkey: the ASCI and the MBI.

Eligible participants were presented with a digital informed consent form on SurveyMonkey explaining the purpose and proce-

dures of the study. Only those who completed an informed consent form and met the inclusion criteria were eligible for the study. Confidentiality was maintained as the study measures were anonymous; no names were documented. The measures took approximately 20 minutes to complete. The responses obtained through these measures were downloaded from SurveyMonkey and stored in a secured folder on the researcher's password-protected computer, which only the researcher and the research chairperson could access. The researcher analyzed the data from the questionnaires on SPSS after transferring the data from a password-protected Excel spreadsheet. All confidential data were stored in a password-protected document on the researcher's locked, private computer. The document was only accessible to the researcher and the researcher's chair. The data will be destroyed after 5 years, and the digital data files will be securely deleted. Upon completing the survey, each respondent received a digital debriefing statement summarizing the study and expressing gratitude for their participation.

Measures

Demographic Questionnaire: Participants completed a questionnaire to identify their range of background characteristics. Variables of age, gender, ethnicity, religion, marital/family status, state of residence, cigarette smoking status, years in practice, place of work, job title, and work situation were obtained.

Attitudes Toward Smoking Cessation Interventions (ASCI): The ASCI scale is a quantitative self-report measure designed to assess healthcare workers' attitudes toward smoking cessation interventions among inpatients with psychiatric diagnoses. The ASCI was developed for the current study and is not based on information associated with the measure's psychometric properties. This measure contains 24 items assessing potential barriers to healthcare workers' attitudes toward implementing smoking cessation interventions among psychiatric inpatients in either an inpatient setting or a short-/long-term care facility, including healthcare workers' perceived priority level, time, resources, intervention success, and patient motivation.

The items in this measure were derived from research on healthcare professionals' behaviors, knowledge, and attitudes toward smoking cessation. The items included in the questionnaire were measured on three 5-point Likert scales, ranging from 1 (lowest priority) to 5 (highest priority) or 1 (never) to 5 (always) regarding priority level, and ranging from 1 (strongly disagree) to 5 (strongly agree) regarding time, resources, intervention success, and patient motivation. Lower scores derived on the Priority Level subscale positively correlated to higher levels of barriers to implementation, while lower scores derived on the Time subscale positively correlated to higher levels of barriers to implementation. Moreover, higher scores derived on the Resources subscale positively correlated to higher levels of barriers to implementation, while higher scores derived on the Intervention Success subscale positively correlated to higher levels of barriers to implementation. Finally, higher scores derived on the Patient Motivation subscale positively correlated to higher levels of barriers to implementation.

Maslach Burnout Inventory (MBI): The MBI is the most widely utilized clinician-administered assessment scale in measuring burnout rates. The MBI was developed to measure the characteristics associated with burnout and was originally administered to professionals in the human services field [50,51]. The MBI contains 22 items associated with the following three subscales: Emotional Exhaustion, Personal Accomplishment, and Depersonalization. The questionnaire items were measured on a 5-point Likert scale ranging from 0 (never) to 4 (always) [48].

The Emotional Exhaustion subscale includes nine items measuring feelings associated with emotional overextension and exhaustion due to work. The Depersonalization subscale has five items assessing one's unfeeling and impersonal response concerning the recipients of services and treatment. The Personal Accomplishment subscale has eight items associated with one's achievement and competency at work. Research suggests that higher scores on the Emotional Exhaustion and Depersonalization subscales and lower scores on the Personal Accomplishment subscale are associated with burnout [47]. The MBI has a satisfactory level of internal consistency, with Cronbach's alpha ratings exceeding the value of .70 for all subscales [52,53].

Results

Demographics

Of the 30 participants who completed the surveys, 11 identified as male and 19 as female. Their ages ranged from 25 to 68 years old, with a mean age of 40.9 years. Regarding ethnicity, the sample identified as primarily Caucasian (57%), African American (20%), and Hispanic (13%). The sample identified their religion as predominately Christian (47%) or Jewish (14%), followed by no religion (13%), atheist (10%), or other (7%). Most were non-smokers (87%), resided in California (27%) or Florida (40%), and were single (40%), married (47%), or divorced (13%). Notably, 53% reported having children. The number of years in practice ranged from 1 to 36, with a mean of 13 years. Moreover, 37% reported working in a residential treatment center, 23% in a skilled nursing facility, and 13% in a hospital or psychiatric inpatient hospital setting. Most were psychologists (27%), registered nurses (23%), counselors (27%), and geriatricians (7%).

The results indicated that more participants endorsed a preference for more smoking cessation training (63%) than those who opposed it (37%). In addition, 63% identified pharmacotherapy in conjunction with counseling or psychotherapy as their most commonly utilized smoking cessation treatments, while 27% endorsed positively reinforcing inpatient prosocial behavior via cigarettes. Most participants reported that their facilities did not enforce designated smoke breaks (73%) and that inpatients smoked throughout the day (47%). Additionally, 47% reported that smoking rates had increased post-COVID-19.

The MBI assessed burnout through the following scores on three subscales: a high score in Emotional Exhaustion, a low score in Personal Accomplishment, and a high score in Depersonalization. Notably, 78% of participants scored in the low (30%) to moderate (48%) range for Emotional Exhaustion, 100% scored in the low (61%) to moderate (39%) range for Depersonalization, and 100% scored in the low range for Personal Accomplishment. Although these scores did not indicate burnout, the results suggested that most participants likely experienced some level of emotional stress related to their work and felt a lack of competence and achievement, accompanied by a personal and empathic approach.

The ASCI questionnaire assessed barriers to implementation. Higher levels of barriers to implementation were associated with the following scores on five separate subscales: lower scores on Priority Level, lower scores on Time, higher scores on Resources, higher scores on Intervention Success, and higher scores on Patient Motivation. Most participants (63%) endorsed a preference for more smoking cessation training, while 34% endorsed a normal (20%) to high (14%) priority level regarding implementing smoking cessation interventions. Moreover, 26% of participants endorsed not having enough time with patients, 63% reported wanting more time with each patient, 64% endorsed a lack of smoking cessation resources at their facility, and 60% reported a lack of smoking cessation support from their facility and colleagues. Regarding the Intervention Success subscale, 33% endorsed skepticism regarding the effectiveness of smoking cessation interventions, 83% reported more critical treatment priorities than addressing smoking cessation, and 41% endorsed motivation to implement smoking cessation interventions. Regarding the Patient Motivation subscale, 27% reported that their patients had the desire or motivation to quit smoking.

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Correlations

A positive relationship was hypothesized between healthcare workers' preference for more smoking cessation training and more perceived barriers. The results supported the hypothesis and indicated a significant, positive correlation between healthcare workers' reported preference for smoking cessation training and resources total score ($r = -0.462$, $p = 0.010$), which suggested that healthcare workers who wanted more smoking cessation training perceived a lack of resources at their facility. These results indicated that as a preference for more smoking cessation training increases, so does a perceived lack of resources. Moreover, as a perceived lack of resources increases, so does a preference for more smoking cessation training. Furthermore, healthcare workers who wanted more smoking cessation training reported more perceived barriers (i.e., a lack of resources).

A positive relationship was hypothesized between healthcare workers with more years of practice and more perceived barriers. The results did not support the latter hypothesis and indicated no correlations between healthcare workers' number of years in practice and perceived barriers. Hence, more years in practice were not correlated with more perceived barriers to implementing smoking cessation interventions (see Table 2). Specifically, approximately 33.33% of the participants endorsed having 5 or fewer years in practice, while approximately 33.33% endorsed having 14 or more years of practice (see Table 2). Moreover, there was no correlation between the number of years in practice and the following

perceived barriers: Priority total score ($r = 0.286$, $p = 0.126$); Time total score ($r = -0.099$, $p = 0.603$); Resources total score ($r = 0.098$, $p = 0.605$); Intervention Success total score ($r = -0.119$, $p = 0.531$), and Patient Motivation total score ($r = 0.217$, $p = 0.249$; see Table 3).

A positive relationship was hypothesized between healthcare workers with a higher burnout score on the MBI instrument and more perceived barriers. A high score in the emotional exhaustion and depersonalization section and a low score in the personal accomplishment section could indicate burnout. However, no such

scores resulted from the current study. No significant correlations resulted from the participants' completion of the MBI (see Table 4).

Exploratory Analyses

There was a significant, positive correlation between healthcare workers' preference for more smoking cessation training and perceived patient motivation ($r = -0.397$, $p = 0.030$), which indicated an association between healthcare workers' preference for additional training and patient motivation. Moreover, as perceived patient motivation increases, a preference for training increases, and vice versa (see Table 1).

Table 1: Correlations.

		Preference for more Smoking Cessation Training	Priority Total Score	Time Total Score	Resources Total Score	Intervention Success Total Score	Patient Motivation Total Score
Preference for more Smoking Cessation Training	Pearson Correlation	1	-0.166	0.046	-.462*	-0.139	-.397*
	Sig (2-tailed)		0.379	0.807	0.01	0.465	0.03
	N	30	30	30	30	30	30
Priority Total Score	Pearson Correlation	-0.166	1	0.184	-0.233	0.36	0.289
	Sig (2-tailed)	0.379		0.33	0.232	0.05	0.121
	N	30	30	30	30	30	30
Time Total Score	Pearson Correlation	0.046	0.184	1	0.058	0.176	0.124
	Sig (2-tailed)	0.807	0.33		0.763	0.351	0.513
	N	30	30	30	30	30	30
Resources Total Score	Pearson Correlation	-0.462	0.225	-0.058	1	0.001	.362*
	Sig (2-tailed)	0.01	0.232	0.763		0.994	0.049
	N	30	30	30	30	30	30
Intervention Success Total Score	Pearson Correlation	-0.139	0.36	0.176	0.001	0.1	0.169
	Sig (2-tailed)	0.465	0.05	0.351	0.994		0.372
	N	30	30	30	30	30	30
Patient Motivation Total Score	Pearson Correlation	-.397*	0.289	0.124	.362*	0.169	1
	Sig (2-tailed)	0.03	0.121	0.513	0.049	0.372	
	N	30	30	30	30	30	30

There was a significant, positive correlation between the priority total score and intervention success total score ($r = 0.360$; $p = 0.050$), which suggested that healthcare workers' perceived success level of implementing interventions was correlated with a perceived higher priority level. This significant correlation indicated that as healthcare workers' perceived priority level increased, the perceived success level of implementing interventions increased (see Table 1). Moreover, the higher a healthcare workers' perceived priority level was regarding smoking cessation, the higher their perceived success level of implementing interventions was and vice versa.

There was a significant, positive correlation between resources

total score and patient motivation total score ($r = 0.362$, $p = 0.049$), which indicated that healthcare workers' endorsement of a lack of smoking cessation resources was associated with a perception of increased patient motivation to quit smoking. Similarly, a significant correlation was observed concerning patient motivation total score and resources total score ($r = 0.362$, $p = 0.049$), which suggested that the perceived lack of resources increased as perceived patient motivation increased. There was also a significant correlation between intervention success total and priority total score ($r = 0.360$, $p = 0.050$), which suggested that healthcare workers' perceived intervention success correlated with perceived higher priority level (see Table 3).

Additionally, the COVID-19 pandemic presented specific barriers to treatment, as 14 of the 30 participants reported that the COVID-19 pandemic presented challenges to smoking cessation.

Among the specific challenges reported, the most commonly endorsed challenge was that smoking cigarettes is a patient's only opportunity for socialization (Table 1,2,3,4).

Table 2: Number of Years in Practice.

		Frequency	Percent	Valid Percent	Cumulative Percent
Valid	1	1	3.3	3.3	3.3
	2	1	3.3	3.3	6.7
	3	4	13.3	13.3	20
	4	2	6.7	6.7	26.7
	5	3	10	10	36.7
	6	2	6.7	6.7	43.3
	10	2	6.7	6.7	50
	11	1	3.3	3.3	53.3
	12	1	3.3	3.3	56.7
	13	1	3.3	3.3	60
	14	2	6.7	6.7	66.7
	15	1	3.3	3.3	70.6
	16	2	6.7	6.7	76.7
	20	2	6.7	6.7	83.3
	25	2	6.7	6.7	90
	35	2	6.7	6.7	96.7
	36	1	3.3	3.3	100
	Total	30	100	100	

Table 3: Correlations.

	Number of Years in Practice	Priority Total Score	Time Total Score	Resources Total Score	Intervention Success Total Score	Patient Motivation Total Score
Number of Years in Practice	1	0.286	-0.099	0.098	-0.119	0.217
		0.126	0.603	0.605	0.531	0.249
	30	30	30	30	30	30
Priority Total Score	0.286	1	0.184	-0.225	0.36	0.289
	0.126		0.33	0.232	0.05	0.121
	30	30	30	30	30	30
Time Total Score	0.099	0.184	1	0.058	0.176	0.124
	0.603	0.33		0.763	0.351	0.513
	30	30	30	30	30	30
Resources Total Score	0.098	0.225	-0.058	1	0.001	.362*
	0.605	0.232	0.763		0.994	0.049
	30	30	30	30	30	30
Intervention Success Total Score	-0.119	0.36	0.176	0.001	1	0.169
	0.531	0.05	0.351	0.994		0.372
	30	30	30	30	30	30
Patient Motivation Total Score	0.217	0.289	0.124	.362*	0.169	1
	249	0.121	0.513	0.049	0.372	
	30	30	30	30	30	30

Table 4: Correlations.

		Emotional Exhaustion Total Score	Personal Accomplishment Total Score	Depersonalization Total Score
Emotional Exhaustion Total Score	Pearson Correlation	1	-0.262	0.282
	Sig (2-tailed)		0.163	0.131
	N	30	30	30
Personal Accomplishment Total Score	Pearson Correlation	-0.262	1	-0.359
	Sig (2-tailed)	0.163		0.051
	N	30	30	30
Depersonalization Total Score	Pearson Correlation	0.282	-0.259	1
	Sig (2-tailed)	0.131	0.051	
	N	30	30	30

Discussion

The current study is predominantly congruent with and advances the previous literature regarding healthcare workers' attitudes toward the implementation of smoking cessation interventions among psychiatric inpatients and highlights related barriers. The current study emphasizes the potential impact on both patient care and healthcare workers' well-being by integrating healthcare provision with psychological well-being in the context of psychiatric inpatient care. The researcher hopes that the current research has the potential to make a significant impact in the healthcare sector by offering valuable data and recommendations for implementing effective smoking cessation programs within psychiatric care settings.

It was hypothesized that healthcare workers who wanted more smoking cessation training would report more barriers. Significant correlational results supported this hypothesis regarding resources. Even though the participants expressed a preference for more smoking cessation training, insufficient facility resources may be hindering their ability to receive such training. These results suggest that healthcare workers' ability to increase their competency related to smoking cessation may depend on available resources, which indicates a barrier to implementing smoking cessation interventions. The latter results are congruent with barriers identified by *Hessami, et al.*, [54] related to a lack of healthcare professional training regarding smoking cessation counseling and insufficient organizational support.

It was hypothesized that healthcare workers with more years of practice would report more perceived barriers, although the results indicated no correlation between a higher number of years in practice and more perceived barriers to implementing smoking cessation interventions. Nevertheless, research conducted by Tamirat [55] concluded that healthcare workers with less than 10 years of practice were 4.75 times more likely to have good practice of smoking cessation interventions compared to healthcare professionals with 10 or more years of practice. The latter research supports the notion that healthcare workers with more years of experience may report more perceived barriers.

It was hypothesized that healthcare workers with a higher

burnout score on the MBI instrument would report more perceived barriers, but no significant correlations were found. Research indicates that increased healthcare worker burnout has been associated with decreased job performance, job commitment, and organizational functioning [56,57]. The current literature reflects a lack of research regarding the relationship between healthcare worker burnout and the implementation of inpatient smoking cessation interventions. Therefore, this study advances the literature by indicating that a high level of healthcare worker burnout may not be associated with more perceived barriers regarding the implementation of smoking cessation interventions.

Sharpe, et al., [58] conducted a systematic review regarding healthcare professionals' reported barriers to providing smoking cessation interventions in inpatient facilities. The most commonly identified barriers included a lack of time, knowledge, support, and a perceived lack of patient motivation to quit smoking [58]. Similar research suggests that a lack of time and insufficient patient motivation are primary barriers to the implementation of smoking cessation interventions [59, 60]. Although findings derived from the current research are congruent with the latter research, as 63% of participants reported wanting more time with each patient, 64% also endorsed a preference for more knowledge in the form of smoking cessation training, 60% reported a lack of smoking cessation support from their facility and/or colleagues, and 63% reported a perceived lack of patient motivation to quit smoking. The results also indicated contradictory results in the form of increased perceived patient motivation.

Moreover, the results indicated that when fewer perceived resources were available to healthcare workers, they perceived patients as having increased motivation to quit smoking. Similarly, perceived patient motivation increases when clinicians endorse a lack of resources. These findings indicate advanced results, as *Hessami, et al.*, [54] found similar results related to healthcare professionals' endorsement of insufficient resources and organization support, but patients' lack of motivation to quit was also identified as a barrier [54,58]. The current study suggests that insufficient resources are available for healthcare workers to implement smoking cessation interventions despite healthcare workers' perceptions of increased patient motivation to quit smoking.

Although the results indicate healthcare workers' perceived lack of competency in smoking cessation, patient motivation to quit smoking is likely not a primary barrier. Of the 30 participants in the current research study, 19 preferred additional smoking cessation training. Since healthcare workers perceived patients' motivation to quit and also endorsed a preference for additional smoking cessation training, these healthcare workers would likely benefit from receiving further specialized training in smoking cessation to better address patient needs.

Furthermore, more smoking cessation resources are needed in inpatient facilities to address patients' motivation to quit smoking. Presumably, the successful implementation of smoking cessation interventions requires inpatient facilities to first recognize and address the need for resources and provide means of intervention for healthcare workers to access and apply appropriate treatment methods, especially if they perceive a patient to possess the motivation to quit smoking.

The results indicated that healthcare workers' perceived success of implementing interventions was correlated with a perceived higher priority level. This finding suggests that when healthcare workers perceive smoking cessation as a priority, their perceived success level of implementing intervention increases and vice versa. Healthcare workers perceived success level of implementing interventions included participants' endorsements in the following areas: confidence in implementation (56%), a lack of skepticism regarding the effectiveness of smoking cessation interventions (40%), and the motivation to implement smoking cessation interventions (41%). The current study did not identify healthcare worker confidence as a barrier to implementation, which results in findings contradictory to *Sharpe, et al.*, [57], who concluded that a lack of clinical confidence was a significant barrier to addressing patients' smoking practices.

The more healthcare workers viewed smoking cessation as a priority, the more likely they were to implement interventions. Regarding differences in attitudes between healthcare workers, the results indicated that most participants endorsed the following priority levels in addressing smoking cessation with patients: geriatricians endorsed a normal priority level, nurses endorsed a low priority level, psychologists endorsed a normal to high priority level, and counselors endorsed a low priority level. *Matouq, et al.*, [61] results were consistent with the aforementioned results, as nurses reported the least amount of smoking cessation interventions, including inquiring about patients' smoking status, advising them to quit, and discussing counseling options, while family physicians reported the highest amount compared to other health professionals.

It is especially important to monitor psychiatric inpatients taking psychotropic medications and adjust dosages accordingly, as decreased smoking behavior can impact the side effects of those medications while inhibiting the maintenance of smoking cessation. These effects may make smoking a unique drug to withdraw from, especially in inpatient settings where many psychiatric patients with chronic diseases may have a propensity for smoking due to the medications prescribed to them.

Despite healthcare workers' perception of increased patient motivation to quit smoking, a perceived lack of smoking cessation resources was endorsed in the present study. These conclusions might mean that patients' desire to quit smoking was overlooked on an organizational level, which has the potential to negatively impact patient prognosis. Patient treatment plans are primarily designed per clinicians' clinical competencies and judgments. Nonetheless, the accuracy of these treatment plans also requires a collaborative process in which patients' subjective goals are considered. Therefore, if patients are motivated to quit smoking and clinicians determine that smoking cessation is a priority, a lack of resources remains a barrier to intervention.

The current study's results indicated a general healthcare worker consensus regarding a lack of resources. More specifically, the main endorsement by healthcare workers concerned the lack of resources to implement smoking cessation interventions. These results indicated that facilities did not support a change in the smoking culture. Healthcare workers are more likely to recommend smoking cessation treatments when they perceive there to be facility support [8]. Research suggests that organizational support may be social support from supervisors and/or coworkers [8,62,63]. Moreover, *Choi and Kim* [8] concluded that a supportive workplace culture that discourages smoking and promotes health is a crucial element in the implementation of smoking cessation programs. Therefore, change needs to be made on an organizational level to shift the smoking culture in inpatient psychiatric facilities. Hence, future research should investigate the barriers that prevent facility owners and administrators from making this change.

More resources for research and programs dedicated to smoking cessation treatment are needed for psychiatric inpatients, including the severely mentally ill, especially since there is limited literature on healthcare workers' attitudes toward smoking cessation in this population despite the high rates of usage. By better understanding the attitudes of healthcare workers and potential barriers on an organizational level concerning smoking cessation, more support services can positively influence treatment planning and patient outcomes in inpatient settings. Smoking cessation interventions should be encouraged or applied more in inpatient settings to potentially reduce the negative effects of nicotine on psychiatric symptoms and disorders, as well as the effects of nicotine on overall health risks.

Clinical Implications

The research has highlighted that healthcare workers' lack of education regarding the history and treatment of tobacco dependence, in conjunction with a lack of time, are factors contributing to current levels of smoking cessation care [64]. *Trapskin, et al.*, [65] concluded that improving healthcare workers' training associated with the implementation of evidence-based smoking cessation treatments can increase the rates at which inpatients receive smoking cessation treatments. These treatments included the following: step-by-step training in tobacco intervention, psychoeducation on counseling and motivational interviewing, suggested scripting for bedside interactions, and appropriate NRT and/or pharmacother-

apy recommendations. Furthermore, ongoing education, formal training, and implementation support are needed to help healthcare workers implement smoking cessation interventions [66].

Smoking cessation among psychiatric inpatients carries significant clinical implications, as quitting smoking can lead to improved mental health outcomes, including reduced symptoms of anxiety and depression. Considering these benefits, the smoking cessation literature reflects a scarcity of smoking cessation interventions in psychiatric inpatient facilities despite the cultural shift of decreasing smoking in the general population. Even though nicotine withdrawal symptoms may initially exacerbate psychiatric symptoms, long-term cessation often leads to improved treatment prognoses. The former viewpoint may contribute to the maintenance of smoking culture in inpatient psychiatric facilities, but resistance to the latter should be more closely examined.

Healthcare workers have utilized cigarettes as a reinforcer for certain inpatient behaviors, such as prosocial behavior, as smoking can be a relaxation agent and also produces stimulatory effects [67,68,15]. The latter effects have contributed to healthcare workers' resistance to implementing smoking cessation interventions despite research supporting the promotion of smoking cessation in inpatient settings, particularly when patients are motivated to quit smoking [15]. Therefore, healthcare workers would likely benefit from comprehensive training and education on evidence-based smoking cessation interventions, including understanding the health risks of smoking, effective counseling techniques, pharmacotherapy options, and strategies for relapse prevention.

Participation in psychoeducational programs aimed at distinguishing nicotine withdrawal from other psychopathology has helped combat healthcare workers' resistance through the development of new clinical skills, which has resulted in more favorable attitudes toward the implementation of smoking cessation interventions [15]. Furthermore, a preparation period, in the form of psychoeducation, is recommended to support healthcare workers in the implementation of smoking cessation interventions.

A variety of evidence-based interventions promote relaxation and well-being and provide alternatives to the relaxation effects produced by smoking. A meta-analysis conducted by *Khoury, et al.*, [69] highlighted the effectiveness of mindfulness-based therapies (i.e., meditation) in reducing anxiety, depression, and stress. Physical activities and support groups that offer social/peer support can also contribute to mood improvements and stress reduction among psychiatric inpatients [70,71].

Regarding reduced medication interactions, smoking can alter the metabolism of certain psychiatric medications, which leads to potential interactions that may result in decreased effectiveness. Smoking cessation can help stabilize medication levels and improve treatment outcomes by enhancing treatment response, as smoking cessation may enhance the efficacy of psychiatric treatments, including psychotherapy and medication. Patients who are motivated to quit smoking may respond better to treatment interventions and experience greater overall improvement in their mental health. Smoking cessation may also result in decreased risk of cardiovascu-

lar disease among psychiatric patients, as well as reduced morbidity and mortality rates.

Therefore, addressing smoking cessation can contribute to overall physical health improvements by reducing the burden of comorbid medical conditions. Quitting smoking can also result in long-term health benefits, including reduced risk of cancer, respiratory diseases, and overall mortality. Supporting smoking cessation in psychiatric inpatients promotes not only immediate mental health benefits but also long-term physical health outcomes and enhanced quality of life by reducing financial burden, improving physical fitness, and promoting a sense of accomplishment and control over one's health. Furthermore, the long-term benefits of smoking cessation are well established and should take precedence over the short-term benefits of smoking.

Reduced hospitalization rates may also result from smoking cessation among psychiatric inpatients by mitigating the risk of smoking-related illnesses and complications. Even though this may result in cost savings for healthcare systems and improve patient well-being, little is being done to implement smoking cessation interventions in this population.

Supporting smoking cessation has the potential to strengthen the therapeutic alliance between patients and healthcare providers by fostering a collaborative approach to addressing both mental health and physical health concerns. Overall, addressing smoking cessation among psychiatric inpatients is essential for improving mental health outcomes, reducing the burden of tobacco-related diseases, and promoting overall well-being. Integrating smoking cessation interventions into inpatient psychiatric treatment plans can lead to comprehensive and holistic care for patients with mental health disorders and should be prioritized.

Limitations

The present study's primary limitations are the sample size and the participants' demographic information. Due to the small sample size, generalizability is limited as the findings may not accurately represent the broader population. Additionally, most participants identified as one or more of the following demographics: female, Caucasian, Christian, and residing in Florida or California. Thus, the results may lack external validity. Based on the nature of this study, the respondents may not have been comfortable answering items honestly despite anonymity.

Furthermore, an additional limitation is that there may have been an assumption among the participants that anonymity could not be ensured, potentially indicating a mob mentality due to the work culture. The latter issue should be considered when interpreting the results. The results indicated that healthcare workers' perceptions of patients' increased motivation to quit smoking were correlated to healthcare workers' perception of a lack of available resources. Even though these results suggest that higher patient motivation was linked to healthcare workers' endorsement of a lack of appropriate resources, it also highlights a limitation, as these results were obtained through subjective self-reports and opinions of healthcare workers since patient motivation was not directly evaluated.

Future Research

Future research is warranted and should encompass a larger sample size to increase generalizability. Regarding healthcare workers priority level in addressing smoking cessation among inpatients (i.e., inquiring about patients' smoking status, assessing patients' readiness to quit smoking, and discussing treatment options with patients), the results of the present study and current literature indicate that physicians and psychologists endorse a higher priority level compared to other mental health professionals [61]. Future research should investigate the difference between healthcare workers' attitudes toward the implementation of smoking cessation interventions.

Future research should also focus on investigating the efficacy of smoking cessation interventions among psychiatric inpatients and examine patients' self-reported motivation to engage in smoking cessation treatment by assessing their motivation to quit smoking, accompanied by their readiness to change. Before changing smoking patterns, the individual's motivation or readiness to change must be considered. Research related to how individuals intentionally attempt to modify addictive behaviors, like cigarette smoking, indicates that successful change consists of a progression through a series of stages, which include pre-contemplation, contemplation, preparation, action, and maintenance [72,73]. These five stages of change describe the different levels of readiness to change. They should be further studied since they represent the cognitive, emotional, and behavioral strategies involved in making behavioral changes.

It is well known and accepted that positive reinforcement makes a difference in altering problem behaviors. However, it may be important to examine the impact of the patients' choice of competing behavior on the stages and processes of change, in addition to a locus of control measure. Future research should assess the impact of various smoking cessation interventions on a particular inpatient sample. However, if front-line providers, like nurses, are trained in implementing these smoking cessation interventions, the effect on public health could be paramount. Future research should focus on direct patient reports regarding their perceived hope, motivation to quit smoking, and readiness to change, as patient motivation in the current study was measured via healthcare workers' perception of patient motivation instead of direct patient reports.

The results indicated that more information is needed regarding the importance of patient motivation compared to sufficient resources concerning the implementation of smoking cessation interventions. Future research should evaluate patients' motivation to quit smoking in comparison to resources provided in a specific inpatient facility. This research would likely clarify how and when smoking cessation interventions are implemented.

In future efforts to research facility resources, organizational barriers should be identified and investigated. The current study sought to better understand healthcare workers' attitudes toward the implementation of smoking cessation interventions in inpatient psychiatric facilities, although the most significant barrier revealed seems to involve professionals at the organizational level. If indi-

viduals with the power to enact change are more closely examined, it could likely result in a deeper understanding of why increased smoking rates in inpatient settings have not changed. Research by *Farver Vestergaard, et al.*, [37] suggested that despite healthcare workers' experience and competency, a supportive institutional framework is necessary to increase the rate at which smoking cessation interventions are implemented. A top-down analysis is needed to influence policies and procedures prioritizing smoking cessation interventions, such as providing staff with adequate resources and training. Without a better understanding of attitudes and barriers at the organizational level, the cultural shift toward decreased smoking rates in inpatient facilities will likely remain stagnant.

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Conflict of Interest

None of the authors have a conflict of interest.

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