



Staff perspectives on smoking cessation treatment in German psychiatric hospitals

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Abstract

Aim Although people with mental illness show a greater severity of nicotine dependence and have a significantly reduced life expectancy because of it, psychiatric staff rarely offer their patients smoking cessation support and are reluctant to encourage patients to quit. In order to improve smoking cessation treatment for psychiatric patients, such staff resistance must be better understood.

Subjects and methods A total of 448 members of staff in eight psychiatric units in Berlin were surveyed in relation to their attitudes towards smoking cessation.

Results Although most participants recognize the importance of smoking cessation in psychiatric patients, they state that they do not adhere to international guidelines which recommend regularly asking patients about their smoking habits and offering cessation support. Staff have little knowledge about how to facilitate smoking cessation treatment and about the influences of smoking on the metabolism of drugs. They also harbor misconceptions about how smoking affects their patients' mental well-being. Many express concern that a quit attempt might thwart psychiatric treatment and lead to aggressive behavior—assumptions unsupported by scientific evidence. The overwhelming majority does not believe it to be realistic that patients can manage to give up smoking during treatment.

Conclusions Staff training should be directed to heighten awareness of the international guidelines and treatment options for smoking cessation and impart knowledge on how smoking impacts both the physical and mental health of psychiatric patients.

Keywords Smoking cessation · Mental health · Psychiatry · Tobacco · Nicotine

Aim

People with mental illness are disproportionately affected by tobacco use. They are two to four times more likely to be dependent on nicotine than the general population (Lasser et al. 2000). More than 70% of people with severe mental illness such as schizophrenia, bipolar affective disorder, or substance use problems smoke (Sheals et al. 2016). There is also an increased smoking prevalence in people suffering from depression and anxiety disorders (Lasser et al. 2000). Smoking is the main reason why the life expectancy

of people with mental illness is reduced by 20% (Ziedonis et al. 2008). 50% of deaths among people with mental illness are related to smoking (Callaghan et al. 2014).

Consequently, international guidelines recommend that psychiatric patients who are smokers should be offered support for smoking cessation—regardless of whether they are outpatients or inpatients. Options include brief interventions by medical staff, individual support or group sessions, nicotine replacement therapy (NRT), and medication (U.S. Department of Health and Human Services 2008; European Network for Smoking and Tobacco Prevention 2016; Batra et al. 2022; National Institute for Health and Care Excellence 2022).

All of these options for smoking cessation treatment have been proven to be successful. Short interventions based on motivational interviewing have been shown to increase the chance of quitting smoking successfully, with a relative risk (RR) of 1.66; 95% CI [1.42, 1.94] (Stead et al. 2013). Group interventions for smoking cessation seem to be as effective as individual support (Batra et al. 2022). Most take

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a cognitive-behavioral approach and their effectiveness has been proven, also in people with mental illness (Thurgood et al. 2016; Denison et al. 2017; Secades-Villa et al. 2017). Regardless of treatment setting, the use of NRT increases the chance of successfully quitting smoking by 50–60% (Thurgood et al. 2016). Two medications are commonly used to help smokers quit: Bupropion is a dopaminergic and noradrenergic antidepressant which improves the chances of a successful quit attempt by a RR of 1.69; 95% CI [1.53, 1.85] (Hughes et al. 2003). Varenicline is a partial agonist at nicotinic acetylcholine receptors and has been shown to be effective, with a RR of 2.27; 95% CI [2.20, 2.55] (Cahill et al. 2012). For smokers with schizophrenia, varenicline was shown to be equally effective as for those without a psychiatric disorder, with no increase in neuropsychiatric adverse events (Evins et al. 2021).

Despite this clear evidence for the effectiveness of smoking cessation treatments, patients in mental health services are comparatively seldom encouraged to quit smoking, and help is rarely offered to them (Association of American Medical Colleges 2007). Many measures to provide smoking cessation support for patients are even viewed critically or downright rejected by staff (Sheals et al. 2016). An emerging field of study therefore aims at understanding in detail the resistance of staff in order to provide a basis to improve the efficacy of smoking cessation treatments (Lawn and Condon 2006; Association of American Medical Colleges 2007; Praveen et al. 2009; Steiner et al. 2009; Banu 2018; Beyraghi et al. 2018). Up to now, however, this field shows a significant gap in investigating staff attitudes on smoking cessation treatment in the German health system in which the promotion of smoking cessation measures falls behind in comparison to other national contexts (Borland et al. 2012; Kotz et al. 2020). This study, the most comprehensive one of its kind on Germany, fills this gap by investigating staff attitudes towards smoking cessation treatment in psychiatric hospitals in Berlin.

Subjects and methods

The Berlin-based state-owned healthcare company Vivantes Netzwerk für Gesundheit GmbH runs ten hospitals with eight psychiatric units and a number of other healthcare and nursing facilities for inpatients and outpatients. A total of 1706 members of staff employed in psychiatric units were invited to participate in a survey of their attitudes towards smoking cessation and were asked for demographic data including their smoking status. The questionnaire, which was based on similar surveys published in the literature (Lawn and Condon 2006; Association of American Medical Colleges 2007; Praveen et al. 2009; Steiner et al. 2009; Banu 2018; Beyraghi et al. 2018), was made available via Lime

Survey software from 1 October to 15 November 2019 and was answered anonymously. Completion of the questions took less than 10 minutes. The hypothesis was that members of staff who are smokers have a more critical view of providing smoking cessation support for psychiatric patients than members of staff who do not smoke. IBM SPSS Statistics 26 and Microsoft Excel 2016 were used to carry out data analysis.

The study protocol was reviewed and approved by *Ethikkommission* of *Hochschule Neubrandenburg*, University of Applied Sciences, Neubrandenburg, Germany (approval number HSNB/KHM/150/19). All participants provided written informed consent prior to completion of the questionnaire.

Results

A total of 448 members of staff in psychiatric units completed the questionnaire, which equals a response rate of 26.3%.

More than two thirds of all participants were of female gender (Table 1). The smoking prevalence in male staff was slightly higher than in female staff. With 34.4%, the largest group of respondents were in their 30s, which also had the highest percentage of smokers, with almost 40%. This contrasts with participants as a whole, two thirds of whom did not smoke or had given up smoking, while a third smoked daily or occasionally. Of all participants, 51.6% stated that they worked as nursing staff and 32.4% worked in substance misuse services. There were significantly more smokers amongst nursing staff than amongst other professional groups, and smoking rates were slightly higher in substance misuse services than in other psychiatric units. Medicotherapeutic staff refers to professionals providing different therapeutic services, such as occupational therapists, physiotherapists, music therapists, dance therapists and others.

With regard to smoking habits, more than 50% of daily smokers stated that they smoked more than ten times per day (Table 2). Every second occasional smoker smoked on a weekly basis. Over 90% of current smokers smoked cigarettes, with other products used infrequently. When asked about their motivation to quit smoking on a scale from 1 (very high) to 5 (very low), daily smokers rated it with an average of 3.37 ± 1.059 and occasional smokers with an average of 2.84 ± 0.987 . The question about their confidence in their ability to quit smoking was answered by daily smokers with an average of 3.03 ± 1.109 and occasional smokers with an average of 2.06 ± 0.944 .

Almost two thirds of the respondents indicated that they believed that patients who smoke should routinely be offered smoking cessation (Table 3). In relation to this question, there is no statistically significant difference between current

Table 1 Demographics and smoking status of participating staff in eight psychiatric units in Berlin, Germany

Question	Reply	Total % (n)	Current smokers
Age in years	< 20	0.7 (3)	33.3 (1)
	20–29	17.9 (80)	38.5 (30)
	30–39	34.4 (154)	39.6 (61)
	40–49	20.6 (92)	35.6 (32)
	50–59	17.9 (80)	27.3 (21)
	> 59	7.4 (33)	18.2 (6)
Gender	Female	68.8 (308)	33.1 (100)
	Male	28.1 (126)	39.5 (49)
	Diverse	1.3 (6)	16.7 (1)
Professional group	Doctor	16.1 (72)	27.8 (20)
	Nurse	51.6 (231)	44.4 (100)
	Medico-therapeutic staff	18.1 (81)	18.5 (15)
	Administrative staff	2.9 (13)	15.4 (2)
	Others	9.4 (42)	34.1 (14)
Working in substance misuse services	Yes	32.4 (145)	37.5 (54)
	No	65 (291)	33 (94)
Smoking status	Daily smokers	22.1 (99)	
	Occasional smokers (less frequent than daily)	11.8 (53)	
	Ex-smokers	23.2 (104)	
	Non-smokers	40.4 (181)	

Table 2 Smoking status of current smokers amongst participating psychiatric staff in Berlin, Germany

Question	Reply	Total of daily smokers* % (n)	Total of occasional smokers* % (n)
Do you/did you smoke	Cigarettes	95 (94)	94.3 (50)
	Cigars	1 (1)	3.8 (2)
	Pipes	1 (1)	1.9 (1)
	E-cigarettes	12.1 (12)	11.3 (6)
	Shisha	2 (2)	3.8 (2)
	Other	3 (3)	0 (0)
Smoking frequency	10/day or less:	45.5 (45)	Weekly: 50.9 (27)
	11 to 20/day:	39.4 (39)	Monthly: 24.5 (13)
	21 to 30/day:	9.1 (9)	Less often: 20.8 (11)
	31 or more:	2 (2)	
How do you rate your motivation to quit smoking?	1 – very high	4 (4)	7.6 (4)
	2	12.1 (12)	24.5 (13)
	3	45.5 (45)	47.2 (25)
	4	18.2 (18)	9.4 (5)
	5 – very low	19.2 (19)	7.6 (4)
How do you rate your confidence that you could succeed in quitting?	1 – very high	7.1 (7)	30.2 (16)
	2	24.2 (24)	32.1 (17)
	3	36.4 (36)	26.4 (14)
	4	17.2 (17)	1.9 (1)
	5 – very low	12.1 (12)	1.9 (1)
Would you like to have more support by your employer to quit smoking?	Yes	38.4 (38)	24.5 (13)
	No	49.5 (49)	67.9 (36)

*For the purpose of further analyzing the data, non-smokers and ex-smokers have been combined into the group “current non-smokers,” and daily smokers and occasional smokers into the group “current smokers.”

non-smokers and smokers ($\chi^2 = 2.684$; $df = 1$; $p = 0.101$). Only every second respondent could confirm that psychiatric

patients were asked about their smoking status at all. Less than 10% of the participants stated that patients who smoked

Table 3 Staff attitudes towards smoking cessation in psychiatric patients in Berlin, Germany

Question	Reply	Total % (n)	Current non-smokers	Current smokers	Comparison statistics
In your opinion, should patients who smoke be routinely offered smoking cessation support?	Yes	65.4 (293)	71.1 (194)	63.3 (93)	$\chi^2 = 2,684$ df = 1 $p = 0,101$
	No	30.6 (137)	28.9 (79)	36.7 (54)	
In your daily work, are your patients routinely asked about their smoking status?	Yes	50.5 (226)	53.5 (145)	54.1 (79)	
	No	44.9 (201)	46.5 (126)	45.9 (126)	
Are patients who smoke routinely offered support to quit smoking?	Yes	8.9 (40)	11 (29)	7.7 (11)	
	No	83.9 (376)	89 (234)	92.3 (131)	
If yes: (Multiple answers possible)	With information material	42.5 (17)			
	With individual support	45 (18)			
	In group sessions	35 (14)			
	With nicotine replacement therapy (nicotine patches, nicotine gums, etc.)	72.5 (29)			
	With medication (varenicline, bupropion, etc.)	10 (4)			
	Other support	27.5 (11)			
How do you rate your patients' motivation to give up smoking during psychiatric treatment?	1- very high	0.2 (1)	0.4 (1)	0 (0)	
	2	1.3 (6)	2.1 (6)	0 (0)	
	3	9.8 (44)	11.8 (33)	6.8 (10)	
	4	30.1 (135)	34.3 (96)	24.3 (36)	
	5 – very low	56.5 (253)	51.4 (144)	68.9 (102)	
How realistic do you think it is that your patients can manage to quit smoking during psychiatric treatment?	1 – very high	0.5 (2)	0.7 (2)	0 (0)	
	2	3.8 (17)	5.7 (16)	0.7 (1)	
	3	17.6 (79)	18.6 (52)	18.1 (27)	
	4	29.7 (133)	30.4 (85)	30.9 (46)	
	5 – very low	46.7 (209)	44.6 (125)	50.3 (75)	
Do you think that smoking can have a positive effect on the mental health of psychiatric patients?	Yes	51.1 (229)	59.5 (138)	74.6 (85)	$\chi^2 = 7,585$ df = 1 $p = 0,006$
	No	27.5 (123)	40.5 (94)	25.4 (29)	
Do you think that if someone quits smoking, the psychiatric illness is more likely to	Get better	11.8 (53)	15.1 (43)	6.6 (10)	
	Remain unchanged	16.3 (73)	13.7 (39)	20.4 (31)	
	Get worse	14.5 (65)	11.6 (33)	19.1 (29)	
	Variable	54.7 (245)	56.5 (161)	52 (79)	
What problems do you anticipate with your patients if there are further restrictions with regard to smoking on site? (Multiple answers possible)	Worsening of psychiatric condition	24.1 (108)			
	More aggressive behavior	90.9 (407)			
	Fewer opportunities to establish positive contact with patient	39.7 (178)			
	Problems with drug metabolism	13.8 (62)			
	Other	14.5 (65)			
What opportunities do you see for your patients if there are further restrictions with regard to smoking on site? (Multiple answers possible)	Improvement in physical health of patients	85.9 (385)			
	Improvement in mental health of patients	32.4 (145)			
	Financial benefits for patients (saved money)	79 (354)			
	Health benefits for others due to reduced secondhand smoke	64.7 (290)			
	Other	5.1 (23)			

were routinely offered smoking cessation. If support was available, it usually involved the prescription of NRT, individual support or handing out educational material.

When hospital sites are compared, it becomes evident that units with a designated task force on smoke-free service provision were more likely to offer support for patients, whereas

in some units, not a single member of staff could confirm that any support was available. According to the responses given by the participants, smoking cessation support is offered significantly more often in substance misuse services than in other psychiatric units ($\chi^2 = 10.604$; $df = 1$; $p = 0.001$).

Participants were then asked to rate how motivated their patients were to quit smoking and how realistic it was that they would succeed while being treated on a psychiatric unit. On a scale from 1 (very high) to 5 (very low), nine out of ten respondents rated their patients' motivation as low or very low (mean value 4.44 ± 0.747). Approximately three quarters of the participants deemed smoking cessation attempts on a psychiatric unit to be unrealistic or even very unrealistic (mean 4.20 ± 0.900).

More than half of the respondents believed that smoking could be good for the mental health of psychiatric patients. In response to this question, staff members who smoked were more inclined to assume a positive effect of smoking on people's mental health than staff members who did not smoke ($\chi^2 = 7.585$; $df = 1$; $p = 0.006$). More than half of the respondents said that the effect of quitting smoking on the psychological well-being could be variable.

Almost all respondents expressed concern that there could be an increase in aggressive behavior among psychiatric patients. About 25% expected worsening of their patients' psychiatric condition after a quit attempt. Many believe that a complete smoking ban would eliminate an important opportunity to establish contact with patients. Interestingly, few participants were concerned that changing smoking habits could affect the way drugs were metabolized.

The participants saw the advantages of extending smoking restrictions on site primarily in the improvement of physical health and through financial savings for patients. Health benefits for others through reduced second-hand smoke were also mentioned. Comparatively few respondents expected positive effects on the psychological well-being of their patients. However, staff appeared to appreciate the many benefits of encouraging smoking cessation in their patients, as the question regarding opportunities in relation to smoking cessation showed higher total frequencies than the questions about associated problems.

When asked about their competence in providing smoking cessation support, the majority (34.8%) rated it as average, while 25.2% gave themselves a good or very good and 29.2% a bad or very bad rating (mean 3.06 ± 1.041). Doctors rated their competence a little higher than nursing staff.

Discussion

The results of this survey show that while a majority of psychiatric staff recognize the importance of smoking cessation in people with mental illness in theory, they

rarely adhere to the international guidelines that recommend regularly recording the smoking status of patients and offering smoking cessation support in everyday clinical practice (U.S. Department of Health and Human Services 2008; European Network for Smoking and Tobacco Prevention 2016; Batra et al. 2022; National Institute for Health and Care Excellence 2022).

The survey shows that staff have relatively little knowledge about how to facilitate smoking cessation treatment. Accordingly, the participants rate their own competence in providing smoking cessation support as average, with doctors assessing their experience in this area somewhat better than other professional groups. In those rare cases where interventions are made, staff do not consider the full array of therapeutic options. Staff mostly prescribe NRT, while other evidence-based alternatives such as medication are almost never considered according to the respondents. It is possible that practitioners have little knowledge and experience with the drugs used for smoking cessation.

This corresponds with a general lack of knowledge on how smoking influences the metabolism of drugs. When asked about possible risks of smoking cessation, only 13.8% of participants expressed concern that giving up smoking could lead to a change in drug metabolism. Smoking affects the breakdown of numerous drugs via the liver's P450 system. In the case of clozapine, olanzapine or benzodiazepines, for example, this can result in a 50% increase in plasma levels. Close monitoring of plasma levels and a careful assessment of medication side effects are therefore necessary in order to avoid the risk of adverse effects after smoking cessation (Taylor et al. 2021). In fact, from this perspective, an inpatient stay can be a good opportunity to recommend a quit attempt, as support is readily available, and plasma levels and possible side effects can be monitored, which may otherwise not be the case.

This study additionally shows that a majority of staff harbor misconceptions about the effects of smoking on their patients' mental health. Most participants saw smoking cessation only as a physical health issue, while only 10% believed that it could improve mental well-being. On the contrary, a large proportion of respondents believed that smoking could even have a positive effect on the mental health of psychiatric patients, and 90% of those surveyed were worried that further restrictions with regard to smoking could cause aggressive behavior in their patients. This is in stark contrast to the scientific evidence. According to a systematic review, quitting smoking had at most minimal effects on symptoms of common psychiatric disorders (schizophrenia, unipolar and bipolar depression, anxiety disorder, post-traumatic stress disorder) (Tidey and Miller 2015). When it comes to depression and anxiety disorders, smoking cessation can lead to an improvement in mental health (Taylor et al. 2014). Also, the

implementation of complete smoking bans does not lead to an increase in threatening behavior or violent attacks (Haller et al. 1996; Velasco et al. 1996; Lawn and Pols 2005; Villari and Barzega 2008; Hofstetter et al. 2010; Hedges and Facer-Irwin 2019).

Finally, the results also demonstrate that psychiatric staff tend to systematically underestimate their patients' motivation and capacity to quit smoking. While studies show that psychiatric patients are just as motivated to quit smoking as smokers without a history of mental health problems (Siru et al. 2009), 90% of staff participating in the survey rated their patients' motivation to quit smoking as low or very low. Even though this tendency to underestimate patients' readiness to give up smoking has been found previously in the literature (Sheals et al. 2016), it seems particularly pronounced amongst psychiatric staff in Berlin.

The results of this study indicate a need for further education and training. Lack of training has been identified in the literature as a barrier to providing smoking cessation (Okoli et al. 2020). Based on the findings of this survey, training measures should be directed to inform staff about the international guidelines and treatment options for smoking cessation, as well as on how smoking impacts both the physical and mental health of psychiatric patients.

Limitations

As no data are available with regard to the demographics of psychiatric staff as a whole, we cannot be certain whether the sample taking part in the survey was representative. The response rate was higher in psychiatric units with a designated task force on smoke-free service provision, which may have skewed the results. The participants were asked about therapeutic options for patients in their clinical practice, but not all of them had direct patient contact (e.g. administrative staff), so it is possible that they had little knowledge of what services were available to patients.

Conclusions

Psychiatric patients are disadvantaged in several ways: by their psychiatric illness, somatic problems, financial difficulties and social exclusion. This vicious cycle can only be broken by providing evidence-based interventions, and this is why offering smoking cessation has to be a priority in people with mental illness. Every psychiatric patient who smokes should be offered smoking cessation support and encouraged to quit. This is particularly important because psychiatric patients smoke more often and more heavily. Smoking has negative effects not only on their physical health, but also on their mental health, especially when other factors like

sedentary lifestyle, physical health problems and the effect of psychotropic and other medication are considered. Even though the majority of staff acknowledged the importance of smoking cessation support in psychiatric patients, their attitudes are partly shaped by false assumptions. This may explain why support to give up smoking is rarely offered. To counter these misconceptions, training for staff is key to promoting a shift in attitudes and enabling staff to provide evidence-based treatments.

Author's contributions DC led the conception and design of the study, acquired, analyzed and interpreted the data, wrote the manuscript and approved the version to be published.

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Data availability The datasets and material used and/or analyzed during the current study are available from the corresponding author on reasonable request.

Code availability Not applicable.

Declarations

Ethics approval The study protocol was reviewed and approved by Ethikkommission of Hochschule Neubrandenburg, University of Applied Sciences, Neubrandenburg, Germany, on 24 May 2019 (approval number HSNB/KHM/150/19).

Consent to participate All participants provided informed consent to participate in the study prior to completing the questionnaire.

Consent for publication All participants provided informed consent for results to be published prior to completing the questionnaire.

Conflicts of interest/Competing interests The author is an auditor for Deutsches Netz Rauchfreier Krankenhäuser & Gesundheitseinrichtungen e.V., a German network of smoke-free hospitals and healthcare facilities.

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References

Association of American Medical Colleges (2007) Physician Behavior and Practice Patterns Related to Smoking Cessation. Association of American Medical Colleges, Washington, DC

- Banu M (2018) Nurses Attitude and Self-Efficacy in Smoking Cessation Care to Hospitalized Patients. *Int Arch Subst Abuse Rehabil* 1:001. <https://doi.org/10.23937/iasar-2017/1710001>
- Batra A, Petersen KU, Hoffmann S, Kiefer F (2022) S3-Leitlinie Rauchen und Tabakabhängigkeit: Screening, Diagnostik und Behandlung, Langversion, 2. Auflage 2021 (redaktionell überarbeitet 2022). Springer, Heidelberg
- Beyraghi N, Mazaheri Meybodi A, Jafarian Bahri RS (2018) Smoking Ban in Psychiatric Inpatient Unit: An Iranian Study on the Views and Attitudes of the Mental Health Staff and Psychiatric Patients. *Psychiatry J* 2018:1–5. <https://doi.org/10.1155/2018/2450939>
- Borland R, Li L, Driezen P, Wilson N, Hammond D, Thompson ME, Fong GT, Mons U, Willemsen MC, McNeill A, Thrasher JF, Cummings KM (2012) Cessation assistance reported by smokers in 15 countries participating in the International Tobacco Control (ITC) policy evaluation surveys: Cessation assistance reported by smokers in 15 countries. *Addiction* 107:197–205. <https://doi.org/10.1111/j.1360-0443.2011.03636.x>
- Cahill K, Stead LF, Lancaster T (2012) Nicotine receptor partial agonists for smoking cessation. *Cochrane Database Syst Rev* 4. <https://doi.org/10.1002/14651858.CD006103.pub6>
- Callaghan RC, Veldhuizen S, Jeysingh T, Orlan C, Graham C, Kakouris G, Remington G, Gatley J (2014) Patterns of tobacco-related mortality among individuals diagnosed with schizophrenia, bipolar disorder, or depression. *J Psychiatr Res* 48:102–110. <https://doi.org/10.1016/j.jpsy.2013.09.014>
- Denison E, Underland V, Mosdøl A, Vist GE (2017) Cognitive therapies for smoking cessation: a systematic review. Oslo, Norway: Knowledge Centre for the Health Services at The Norwegian Institute of Public Health (NIPH); 2017 Apr 26. Report from the Norwegian Institute of Public Health No. 2017-13
- European Network for Smoking and Tobacco Prevention (2016) ENSP guidelines for treating tobacco dependence. Brussels: European Network for Smoking and Tobacco Prevention
- Evins AE, West R, Benowitz NL, Russ C, Lawrence D, McRae T, Maravic MC, Heffner JL, Anthenelli RM (2021) Efficacy and Safety of Pharmacotherapeutic Smoking Cessation Aids in Schizophrenia Spectrum Disorders: Subgroup Analysis of EAGLES. *PS* 72:7–15. <https://doi.org/10.1176/appi.ps.202000032>
- Haller E, McNiel DE, Binder RL (1996) Impact of a smoking ban on a locked psychiatric unit. *J Clin Psychiatry* 57:329–332
- Hedges E, Facer-Irwin E (2019) Implementation of a smoke-free policy appears to reduce physical violence in inpatient settings. *Evidence Based Mental Health* 22:e8–e8. <https://doi.org/10.1136/ebment-2018-300072>
- Hofstetter V, Rohner A, Müller-Isberner R (2010) Die Umsetzung eines Rauchverbots im Maßregelvollzug: Ist dies möglich, sinnvoll und legal? *SUCHT* 56:423–427. <https://doi.org/10.1024/0939-5911/a000060>
- Hughes JR, Stead LF, Lancaster T (2003) Antidepressants for smoking cessation. *Cochrane Database Syst Rev*. <https://doi.org/10.1002/14651858.CD000031>
- Kotz D, Batra A, Kastaun S (2020) Smoking Cessation Attempts and Common Strategies Employed. *Dtsch Arztebl Int*. <https://doi.org/10.3238/arztebl.2020.0007>
- Lasser K, Boyd JW, Woolhandler S, Himmelstein DU, McCormick D, Bor DH (2000) Smoking and mental illness: A population-based prevalence study. *JAMA* 284:2606–2610. <https://doi.org/10.1001/jama.284.20.2606>
- Lawn S, Condon J (2006) Psychiatric nurses' ethical stance on cigarette smoking by patients: determinants and dilemmas in their role in supporting cessation. *Int J Ment Health Nurs* 15:111–118. <https://doi.org/10.1111/j.1447-0349.2006.00410.x>
- Lawn S, Pols R (2005) Smoking Bans in Psychiatric Inpatient Settings? A Review of the Research. *Australian New Zealand J Psychiatr* 39:866–885. <https://doi.org/10.1080/j.1440-1614.2005.01697.x>
- National Institute for Health and Care Excellence (2022) Tobacco: preventing uptake, promoting quitting and treating dependence. [NG 209]
- Okoli CTC, Otachi JK, Seng S (2020) Assessing opinions and barriers to providing evidence-based tobacco treatment among health care providers within an in-patient psychiatric facility. *Null* 29:631–641. <https://doi.org/10.1080/09638237.2019.1581328>
- Praveen KT, Kudlur SNC, Hanabe RP, Egbewunmi AT (2009) Staff attitudes to smoking and the smoking ban. *Psychiatr Bull* 33:84–88. <https://doi.org/10.1192/pb.bp.107.017673>
- Secades-Villa R, González-Roz A, García-Pérez Á, Becoña E (2017) Psychological, pharmacological, and combined smoking cessation interventions for smokers with current depression: A systematic review and meta-analysis. *PLoS One* 12:e0188849. <https://doi.org/10.1371/journal.pone.0188849>
- Sheals K, Tombor I, McNeill A, Shahab L (2016) A mixed-method systematic review and meta-analysis of mental health professionals' attitudes toward smoking and smoking cessation among people with mental illnesses: Mental health professionals' views on smoking. *Addiction* 111:1536–1553. <https://doi.org/10.1111/add.13387>
- Siru R, Hulse GK, Tait RJ (2009) Assessing motivation to quit smoking in people with mental illness: a review. *Addiction* 104:719–733. <https://doi.org/10.1111/j.1360-0443.2009.02545.x>
- Stead LF, Buitrago D, Preciado N, Sanchez G, Hartmann-Boyce J, Lancaster T (2013) Physician advice for smoking cessation. *Cochrane Database Syst Rev* 5. <https://doi.org/10.1002/14651858.CD000165.pub4>
- Steiner JL, Weinberger AH, O'Malley SS (2009) A Survey of Staff Attitudes About Smoking Cessation. *Psychiatr Serv* 60:707–708. <https://doi.org/10.1176/appi.ps.60.5.707-b>
- Taylor G, McNeill A, Girling A, Farley A, Lindson-Hawley N, Aveyard P (2014) Change in mental health after smoking cessation: systematic review and meta-analysis. *BMJ* 348:g1151–g1151. <https://doi.org/10.1136/bmj.g1151>
- Taylor DM, Barnes TRE, Young AH (2021) *The Maudsley Prescribing Guidelines in Psychiatry*, 14th edn. John Wiley & Sons
- Thurgood SL, McNeill A, Clark-Carter D, Brose LS (2016) A Systematic Review of Smoking Cessation Interventions for Adults in Substance Abuse Treatment or Recovery. *Nicotine Tob Res* 18:993–1001. <https://doi.org/10.1093/ntr/ntv127>
- Tidey JW, Miller ME (2015) Smoking cessation and reduction in people with chronic mental illness. *BMJ* h4065. <https://doi.org/10.1136/bmj.h4065>
- U.S. Department of Health and Human Services (2008) *Treating Tobacco Use and Dependence*. U.S. Department of Health and Human Services, Rockville, MD
- Velasco J, Eells TD, Anderson R, Head M, Ryabik B, Mount R, Lippmann S (1996) A two-year follow-up on the effects of a smoking ban in an inpatient psychiatric service. *Psychiatr Serv* 47:869–871. <https://doi.org/10.1176/ps.47.8.869>
- Villari V, Barzega G (2008) Smoking Bans on Psychiatric Units: Boundaries and Health Promotion. *Psychiatr Serv* 59:1063–1064. <https://doi.org/10.1176/appi.ps.59.9.1063-b>
- Ziedonis D, Hitsman B, Beckham JC, Zvolensky M, Adler LE, Audrain-McGovern J, Breslau N, Brown RA, George TP, Williams J, Calhoun PS, Riley WT (2008) Tobacco use and cessation in psychiatric disorders: National Institute of Mental Health report. *Nicotine Tob Res* 10:1691–1715. <https://doi.org/10.1080/1462200802443569>

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