HHS Public Access

Author manuscript

J Dual Diagn. Author manuscript; available in PMC 2018 July 01.

Published in final edited form as:

J Dual Diagn. 2017 ; 13(3): 179–183. doi:10.1080/15504263.2017.1326651.

An Online Survey of Family Members' Beliefs and Attitudes About Smoking and Mental Illness

Kelly A. Aschbrenner, PhD[a,b], **Lisa B. Dixon, MD, MPH**[c], **John A. Naslund, MPH**[a], **John Carlo M. Bienvenida, MPH**[a], **Kinsey L. McManus, MSW**[d], **Stephen J. Bartels, MD, MS**[a,b,e], and **Mary F. Brunette, MD**[b]

[a]The Dartmouth Institute for Health Policy and Clinical Practice, Dartmouth College, Lebanon, New Hampshire, USA

[b]Department of Psychiatry, Geisel School of Medicine at Dartmouth, Lebanon, New Hampshire, USA

[c]Department of Psychiatry, Columbia University Medical Center, New York, New York, USA

[d]National Alliance on Mental Illness, New York, New York, USA

[e]Department of Community and Family Medicine, Geisel School of Medicine at Dartmouth, Lebanon, New Hampshire, USA

Abstract

Objective—Family beliefs about smoking and cessation may influence whether individuals with mental illness who smoke use effective cessation treatment. We surveyed family members online regarding beliefs about smoking and cessation among people with mental illness.

Method—Two hundred fifty-six family members of individuals with mental illness completed an online survey. Responses were summarized and *t* tests were used to compare responses based on the family member's smoking status.

Results—One-quarter of respondents agreed that people with mental illness must smoke to manage mental health symptoms, nearly half (48%) expressed uncertainty about the whether nicotine replacement therapy is harmful for this population, and 69% believed that family members do not have the skills to help an individual with mental illness quit smoking.

Conclusions—Misconceptions about smoking and mental illness and uncertainty about the safety of cessation treatment may interfere with family support for quitting smoking among people with mental illness.

Keywords

Smoking; mental illness; smoking cessation; families; e-survey

CONTACT: John Carlo M. Bienvenida, john.bienvenida@dartmouth.edu, 294 Daniel Webster Highway, Merrimack, NH 03054, USA.

Disclosures

The authors have no conflicts or additional income to report.

Many people with mental illness are interested in quitting smoking (Aschbrenner et al., 2015; Ferron et al., 2011) and want more support for quit attempts from people in their social networks (Aschbrenner et al., 2017). Extensive research on health behavior change has demonstrated the positive influence of perceived social support from family and friends on making healthy changes, such as quitting smoking and losing weight (Ajzen, 1991). Family members have been effectively trained to promote cessation treatment use among individuals who smoke in the general population, but this approach has not been tested among individuals with mental illness who smoke (Patten et al., 2011). Family members could be a powerful resource for individuals with mental illness who smoke by providing information about programs for quitting, encouraging and praising progress toward quitting, and reinforcing cessation treatment use (Lawn, Bowman, Wye, & Wiggers, 2016). However, common misconceptions about smoking and mental illness, including the belief that smoking has mental health benefits and that quitting smoking could threaten mental health recovery, may discourage families from helping a loved one with mental illness quit (Prochaska 2011). Little is known about family members' understanding and beliefs about smoking and cessation in people with mental illness.

We partnered with the National Alliance on Mental Illness of New York City (NAMI-NYC Metro) to conduct an online survey of family members' attitudes and beliefs about smoking among people with mental illness. NAMI-NYC Metro is a grassroots organization that provides support, education, and advocacy for families and individuals who live with mental illness. As the largest affiliate of the National Alliance on Mental Illness (NAMI), NAMI-NYC Metro works with NAMI affiliates and community stakeholders to educate the public on mental health stigma, advocate for legislation to prevent discrimination in people with mental illness, and improve mental health care. Trained NAMI volunteers provide peer-led classes and support groups to families and individuals living with mental illness throughout the five boroughs of NYC. National advocacy and support organizations such as NAMI are promising platforms for influencing beliefs, attitudes, and knowledge about smoking and cessation for people with mental illness at a population level.

The objectives of the present study were to (a) describe family members' beliefs and attitudes about smoking and mental illness and (b) compare responses based on family members' smoking status. The study involved a cross-sectional online survey of individuals who subscribed to the NAMI-NYC Metro organization e-mail list.

Methods

In the fall of 2016, NAMI-NYC Metro sent an e-mail to approximately 13,000 subscribers announcing an online survey to assess family members' thoughts and beliefs about smoking among people with mental illness. E-mail subscribers included individuals who were not members of the target population (i.e., family members of individuals with mental illness who smoke), although the proportion was unknown. The announcement included a link to an anonymous online survey on the Survey-Monkey platform. The e-survey was distributed once per week over a three-week period from October 10 to October 28, 2016. In the first section of the e-survey, participants were asked to report their age, gender, race and ethnicity, smoking status (e.g., current, former, or never smoker), and whether they were

related to a person with mental illness and, if so, the type of relationship (e.g., parent, child, sibling, other). We did not collect information on the family member's discrete psychiatric diagnosis. The second section included 10 items assessing beliefs and attitudes about smoking and mental illness developed by tobacco cessation in mental illness experts and pilot-tested to asses face validity among 40 members from a NAMI state affiliate.

Among the 10 e-survey items (see Table 1), 7 items focused on common concerns people have about smoking and mental illness, 2 items assessed opinions about the health consequences of smoking for people with mental illness, and 1 item assessed beliefs about whether family members had the necessary skills to help an individual with mental illness quit. All procedures performed in this study were in accordance with the ethical standards of Dartmouth College and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards. The e-survey did not collect any personally identifiable information and thus was exempt from review by the Dartmouth College Committee for the Protection of Human Subjects Institutional Review Board.

Analysis

Descriptive statistics were used to characterize the sample and independent *t* tests were used to examine differences in e-survey responses based on family members' smoking status (i.e., family members who formerly or currently smoked vs. family members who never smoked). We grouped family members together who were former and current smokers because we hypothesized that their beliefs and perceptions about smoking would be more similar than those of family members who had never smoked. Data analyses were conducted using SPSS version 23.

Results

During the 21 day e-survey period, 497 (3.8%) of the 13,000 subscribers to the NAMI-NYC Metro e-mail list responded to the e-survey. Fifty-two percent ($n = 256$) of respondents indicated that they were family members of an individual with mental illness who smokes and therefore eligible for the survey. Family member respondents were 83% female and 69% White, 11% Black, and 8% Hispanic or Latino. The median age of family member respondents was 54.7 years ($SD = 14.2$). Among family member respondents, 11% currently smoked, 48% formerly smoked, and 41% had never smoked. The types of relationships family members had with a loved one with mental illness who smoked included ("He or she is my …") child (29%), parent (21%), spouse (6%), sibling (19%), extended family member (13%), and other (e.g., roommates; 12%).

The e-survey results for family member respondents are reported in Table 1. One-quarter of respondents agreed that people with mental illness must smoke to manage mental health symptoms. Nearly half (48.4%) of family member respondents expressed uncertainty about whether nicotine replacement therapy is harmful for people with mental illness. Forty-eight percent of family member respondents indicated that they were more concerned about the effects of mental illness than the effects of smoking on their loved one. Family members who never smoked were significantly more likely than those who currently or formerly smoked to agree with the statement that most family members do not have the necessary

skills to help an individual with mental illness quit smoking, $t(248.9) = -2.37$, $p = .017$. There were no other significant differences in e-survey responses based on family members' smoking status.

Discussion

Results from this cross-sectional e-survey of individuals who subscribed to a NAMI e-mail list highlight uncertainty among family members about the about the effect of smoking on mental health symptoms and the safety of cessation treatment for individuals with mental illness who smoke. The results also revealed that the majority of family members do not believe they have the necessary skills to help an individual with mental illness quit smoking. These beliefs may be critical targets for family education about smoking and mental illness and suggest the need for family member skills training to help a loved one with mental illness quit smoking.

The belief that smoking helps people with mental illness manage mental health symptoms and that quitting smoking would make these symptoms worse is shared by many individuals with mental illness who smoke as well as by mental health professionals (Sheals, Tombor, McNeill, & Shahab, 2016; Trainor & Leavey, 2017; Twyman, Bonevski, Paul, & Bryant, 2014). The nicotine from smoking can provide a mild relaxing effect and temporarily relieves uncomfortable feelings of tension and anxiety associated with nicotine withdrawal. Thus, individuals with mental illness who smoke and their families develop the notion, unsupported by research, that smoking helps with mental health symptoms and they often fear adverse psychological effects of quitting. However, the majority of studies show that mental health symptoms do not worsen when individuals with mental illness smoke less or quit smoking with cessation treatment and that smoking cessation is associated with reduced depression, anxiety, and stress and improved positive mood and quality of life compared with continuing to smoke (Taylor et al., 2014; Tsoi, Porwal, & Webster, 2013).

Uncertainty about the safety of smoking cessation medication among smokers with mental illness stands as a powerful barrier to promoting its use. Numerous studies have established the safety of cessation medications, specifically varenicline, bupropion, and nicotine replacement therapies, for people with mental illness (Anthenelli et al., 2016; Tsoi et al., 2013). However, many family members do not have access to the latest scientific research on smoking cessation treatment and misinformed health professionals may reinforce family members' concerns about the safety of cessation medication for people with mental illness (Beard, McDermott, McEwen, & West, 2012). Educating family members about pharmacotherapy and behavioral treatments for quitting has the potential to promote family member approval and support for individuals with mental illness who smoke to use effective smoking cessation medications.

Sixty-nine percent of family members who responded to this e-survey felt that most family members do not have the necessary skills to help an individual with mental illness quit smoking. Many health professionals feel unequipped to help people with mental illness quit smoking (Robson, Haddad, Gray, & Gournay, 2013) and, therefore, may not be reliable sources of guidance and support for family members who want to help a loved one quit.

National mental health advocacy and support organizations such as NAMI are promising platforms for engaging family members in interventions that give them the education, tools, skills training, and support they need to help a loved one with mental illness quit smoking. Family members and significant others of people with mental illness turn to NAMI seeking education and advice for coping with a loved one's mental illness. Through NAMI they learn new techniques for problem solving and strategies for handling relapses and crisis and receive guidance on locating needed supports and services. Helping a loved one with mental illness to quit smoking would likely require similar access to education, peer-to-peer support, and community-based supports. Family members who never smoked were significantly more likely than those who currently or formerly smoked to believe that most family members do not have the necessary skills to help an individual with mental illness quit smoking. Almost half (48%) of family member respondents formerly smoked. Family members affiliated with NAMI who themselves have successfully quit smoking may be ideally poised to serve as peer leaders who could provide encouragement and emotional and practical support to other family members in their efforts to support a loved one's effort to quit smoking.

Limitations

This cross sectional e-survey was conducted online with individuals who subscribed to the NAMI-NYC Metro email list. The response rate for this e-survey was low. Meta-analyses have found that Web-based surveys using e-mail contact have significantly lower response rates (up to 20% lower) compared to other modes (Shih & Fan, 2009). A number of factors may have influenced the low response rate, including a high proportion of individuals subscribed to the NAMI-NYC Metro e-mail list who were not family members of individuals with mental illness (and for whom the e-survey was therefore irrelevant), automatic filter tools that classify invitations to participate in Web-based surveys as spam, excessive number of e-surveys that individuals are requested to complete, and disinterest in sharing beliefs and attitudes about smoking and cessation in people with mental illness. Thus, findings from this study may reflect the beliefs and attitudes of a subgroup of family members of individuals with mental illness who smoke. The results reported here may not necessarily be generalizable to family members who are not affiliated with NAMI. While the survey appears to have face validity, other psychometric testing on the survey instrument's reliability and validity has not been conducted. However, these weaknesses in the study are mitigated by its major strength extending recent literature exploring the potential for family members to help a loved one with mental illness quit smoking (Lawn et al., 2017; Lawn, McNaughton, & Fuller, 2015).

Conclusions

Many individuals with mental illness who smoke want more support from family members to help them quit smoking. However, common misconceptions about effects of smoking on mental health and uncertainty about the safety of smoking cessation treatment for individuals with mental illness who smoke are potential barriers to helping a loved one with mental illness quit. National mental health advocacy and support organizations such as NAMI are promising venues for providing education and skills training necessary to help a loved one with mental illness quit smoking.

Acknowledgments

We thank all family member participants who contributed to our research.

Funding

This study was funded by The Dartmouth Clinical and Translational Science Institute, under award number UL1TR001086 from the National Center for Advancing Translational Sciences of the National Institutes of Health. Partial support was received from the Health Promotion Research Center at Dartmouth funded by a grant from the United States Centers for Disease Control and Prevention (Cooperative Agreement Number U48 DP005018). The content is solely the responsibility of the author(s) and does not necessarily represent the official views of the funders.

References

Ajzen I. The theory of planned behavior. Organizational Behavior and Human Decision Processes. 1991; 50:179–211.

Anthenelli RM, Benowitz NL, West R, St Aubin L, McRae T, Lawrence D, … Evins AE. Neuropsychiatric safety and efficacy of varenicline, bupropion, and nicotine patch in smokers with and without psychiatric disorders (EAGLES): A double-blind, randomised, placebo-controlled clinical trial. The Lancet. 2016; 387:2507–2520. DOI: 10.1016/S0140-6736(16)30272-0

Aschbrenner KA, Brunette MF, McElvery R, Naslund JA, Scherer EA, Pratt SI, Bartels SJ. Cigarette smoking and interest in quitting among overweight and obese adults with serious mental illness enrolled in a fitness intervention. Journal of Nervous and Mental Disorder. 2015; 203(6):473–476. DOI: 10.1097/nmd.0000000000000309

Aschbrenner KA, Naslund JA, Gill L, Bartels SJ, O'Malley AJ, Brunette MF. Preferences for smoking cessation support from family and friends among adults with serious mental illness. Psychiatric Quarterly. 2017; 87(3):401–415. DOI: 10.1007/s11126-016-9485-4

Beard E, McDermott M, McEwen A, West R. Beliefs of stop smoking practitioners in United Kingdom on the use of nicotine replacement therapy for smoking reduction. Nicotine Tobacco Research. 2012; 14(6):639–647. DOI: 10.1093/ntr/ntr260 [PubMed: 22180579]

Ferron JC, Brunette MF, He X, Xie H, McHugo GJ, Drake RE. Course of smoking and quit attempts among clients with co-occurring severe mental illness and substance use disorders. Psychiatric Services. 2011; 62(4):353–359. [PubMed: 21459985]

Lawn S, Bowman J, Wye P, Wiggers J. Exploring the potential for family carers to support people with mental illness to stop smoking. Journal of Dual Diagnosis. 2017; 13(1):52–59. DOI: 10.1080/15504263.2016.1267829 [PubMed: 27918872]

Lawn S, McNaughton D, Fuller L. What carers of family members with mental illness say, think and do about their relative's smoking and the implications for health promotion and service delivery: A qualitative study. International Journal of Mental Health Promotion. 2015; 17(5):261–277. DOI: 10.1080/14623730.2015.1080462

Patten CA, Smith CM, Brockman TA, Decker PA, Hughes CA, Nadeau AM, … Zhu SH. Support-person promotion of a smoking quitline: A randomized controlled trial. American Journal of Preventive Medicine. 2011; 41(1):17–23. DOI: 10.1016/j.amepre.2011.03.012 [PubMed: 21665059]

Prochaska JJ. Smoking and mental illness—breaking the link. New England Journal of Medicine. 2011; 365(3):196–198. DOI: 10.1056/NEJMp1105248 [PubMed: 21774707]

Robson D, Haddad M, Gray R, Gournay K. Mental health nursing and physical health care: A cross-sectional study of nurses' attitudes, practice, and perceived training needs for the physical health care of people with severe mental illness. International Journal of Mental Health Nursing. 2013; 22(5):409–417. DOI: 10.1111/j.1447-0349.2012.00883.x [PubMed: 23066812]

Sheals K, Tombor I, McNeill A, Shahab L. A mixed-method systematic review and meta-analysis of mental health professionals' attitudes toward smoking and smoking cessation among people with mental illnesses. Addiction. 2016; 111(9):1536–1553. DOI: 10.1111/add.13387 [PubMed: 27003925]

Shih TH, Fan X. Comparing response rates in e-mail and paper surveys: A meta-analysis. Educational Research Review. 2009; 4(1):26–40. DOI: 10.1016/j.edurev.2008.01.003

Taylor G, McNeill A, Girling A, Farley A, Lindson-Hawley N, Aveyard P. Change in mental health after smoking cessation: Systematic review and meta-analysis. British Medical Journal. 2014; 348:1151.doi: 10.1136/bmj.g1151

Trainor K, Leavey G. Barriers and facilitators to smoking cessation among people with severe mental illness: A critical appraisal of qualitative studies. Nicotine Tobacco Research. 2017; 19(1):14–23. DOI: 10.1093/ntr/ntw183 [PubMed: 27613905]

Tsoi DT, Porwal M, Webster AC. Interventions for smoking cessation and reduction in individuals with schizophrenia. Cochrane Database Systematic Review. 2013; 2:Cd007253.doi: 10.1002/14651858.CD007253.pub3

Twyman L, Bonevski B, Paul C, Bryant J. Perceived barriers to smoking cessation in selected vulnerable groups: A systematic review of the qualitative and quantitative literature. British Medical Journal Open. 2014; 4(12):e006414.doi: 10.1136/bmjopen-2014-006414

Table 1

NAMI family members' beliefs and attitudes about smoking and mental illness ($N = 256$).

	Strongly agree		Agree		Neither agree nor disagree		Disagree		Strongly disagree	
Survey items	***n***	**%**	***n***	**%**	***n***	**%**	***n***	**%**	***n***	**%**
People with mental illness must smoke to manage mental health symptoms	26	10.2	34	13.3	87	34.0	66	25.8	43	16.8
Quitting smoking would make mental health symptoms worse	17	6.6	47	18.4	80	31.3	74	28.9	38	14.8
Most people with mental illness who smoke aren't interested in quitting smoking	28	10.9	73	28.5	68	26.6	62	24.2	25	9.8
Smoking helps people with mental illness cope with the stress in their lives	55	21.5	134	52.3	32	12.5	21	8.2	12	4.7
People with mental illness cannot quit smoking	11	4.3	23	9.0	51	19.9	112	43.8	58	22.7
Nicotine replacement therapy can be harmful for people with mental illness	6	2.3	20	7.8	124	48.4	64	25.0	40	15.6
I am more concerned about the effects of mental illness than the effects of smoking on my loved one	54	21.1	70	27.3	36	14.1	63	24.7	32	12.5
People with mental illness who smoke should not be encouraged to cut down or quit smoking unless they are free of mental health symptoms	10	3.9	22	8.6	43	16.8	107	41.8	74	28.9
Smoking does not cause health problems for my loved one	3	1.2	9	3.5	14	5.5	68	26.6	162	63.3
Most family members do not have the necessary skills to help a smoker with mental illness stop smoking	58	22.7	118	46.1	31	12.1	31	12.1	17	6.6

Note. NAMI = National Alliance on Mental Illness.