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Readiness to Quit Smoking among Persons Hospitalized with Serious Mental Illness: the Role of Symptom Severity

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Beliefs prevail that mental illness and greater symptom severity are major barriers to interest in and success with quitting smoking (1). Yet, recent studies have found 80-89% of smokers hospitalized in psychiatry intend to quit smoking within the next six months (2, 3).

Smoking contributes to and exacerbates numerous medical conditions, and persons with mental illness report poorer physical health than the general population (4). Little is known regarding the role of physical health and quit intentions among individuals with acute mental illness.

In a sample of 956 adult daily smokers recruited between 2009-2013 during a smoke-free psychiatric hospitalization, we examined the association of mental and physical health severity with tobacco dependence and readiness to quit smoking. The IRB-approved study was conducted in three San Francisco Bay Area hospitals with participant informed consent. Measures of mental and physical health functioning (SF-12); psychiatric diagnosis and symptom severity (BASIS-24); tobacco dependence (FTCD); confidence, desire, and perceived difficulty with quitting; and smoking stage of change were completed during hospitalization by interview.

With a 73% recruitment rate, the sample was representative of patients at the participating hospitals with 51% male; 48% non-Hispanic Caucasian, 23% African American, and 29% other race/ethnicity; and 21% employed. Most (66%) had co-occurring disorders, with 61% meeting criteria for a substance use disorder, 32% bipolar disorder, 27% non-affective psychosis, 39% PTSD, 27% unipolar depression, and 28% ADHD. Prior to hospitalization, participants averaged 17 ± 10 cigarettes/day, 19 ± 14 years of smoking, with moderate dependence (FTCD = 5 ± 2); 29.6% did not intend to quit in the near future

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(precontemplation), 46.8% intended to quit in 6 months (contemplation), and 23.6% were preparing to quit in the next month.

In multivariate regression models adjusting for age, sex, race/ethnicity, income, education, hospital site (academic vs. community), and tobacco dependence, poorer perceived physical health on the SF-12 was associated with contemplating and preparing to quit, and greater desire to quit, but also greater tobacco dependence and anticipated difficulty staying quit (range of $|B|=.07-.13$; all $ps<.05$). Poorer mental health functioning on the SF-12 and greater severity of psychological symptoms on the BASIS-24 was associated with contemplating and preparing to quit, greater desire and expected success with quitting, but also greater tobacco dependence and anticipated difficulty staying quit (range of $|B|=.08-.12$; all $ps<.05$) (Table 1).

The findings indicate that perceived symptomatology does not hinder, and may instead, motivate cessation. Poorer perceived physical health and greater psychiatric symptoms were associated with greater, not lesser, motivation to quit smoking. Although statistically significant and consistent, the associations were weak in strength, accounting for 0.7%-3% of the variance in tobacco dependence and readiness to quit smoking.

A recent meta-analysis concluded quitting smoking is associated with reductions in depression, anxiety, and stress, and with improvements in mood and quality of life among persons with and without psychiatric disorders (5). Clinicians are critical in addressing tobacco-related disparities in psychiatric populations and can improve cessation success rates by building patient confidence and informing that quitting smoking can improve physical and mental health.

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References

1. Association of American Medical Colleges. Physician behavior and practice patterns related to smoking cessation, full report. 2007
2. Prochaska JJ, Fletcher L, Hall SE, Hall SM. Return to smoking following a smoke-free psychiatric hospitalization. *Am J Addict*. 2006; 15(1):15–22. [PubMed: 16449089]
3. Siru R, Hulse GK, Khan RJK, Tait RJ. Motivation to quit smoking among hospitalised individuals with and without mental health disorders. *Aust N Z J Psychiatry*. Jul; 2010 44(7):640–7. [PubMed: 20560851]
4. U.S. Department of Health and Human Services. How Tobacco Smoke Causes Disease: The Biology and Behavioral Basis for Smoking-Attributable Disease: A Report of the Surgeon General [Internet]. Smoking and Tobacco Use. 2010. [cited 2014 Jan 24]. Available from: http://www.cdc.gov/tobacco/data_statistics/sgr/
5. 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; *BMJ* [Internet]. Feb 13. 2014 p. 348 cited 2014 Mar 22 Available from: <http://www.ncbi.nlm.nih.gov/pmc/articles/PMC3923980/>

Table 1

Descriptive statistics and standardized B values and odds ratios from multivariate regression analyses predicting nicotine dependence, thoughts about abstinence, and stage of change from demographic variables and perceived psychological and physical symptoms

Independent variables	Descriptive Statistics		Tobacco Dependence		Desire to quit		Expectation of success		Difficulty staying abstinent		Contemplation ¹		Preparation ¹	
	N=956	%	M±SD	B	B	B	B	B	B	OR	95% CI	OR	95% CI	
Demographics														
Age			39±14	.18***	.15***	.10**	-.07*			1.02**	1.00-1.03	1.01	1.00-1.03	
Female Gender	465	49%		-.04	.07*	.03				1.13***	1.05-1.22	1.03	.95-1.12	
Non-Hispanic White Ethnicity	477	48%		-.07*	.01	.07	-.02			1.48*	1.08-2.02	1.06	.74-1.53	
> High School Education	561	59%		-.13***	-.02	-.05	-.01			.88	.64-1.21	.93	.64-1.35	
On a Psychiatric Pension	373	39%		.12***	.01	-.02	.04			.92	.66-1.28	1.21	.83-1.79	
Academic Hospital	231	24%		-.01	-.05	-.08*	-.02			.96	.68-1.34	1.17	.79-1.72	
Tobacco Dependence			5±2	-	.05	-.09***	.11***			1.44	1.00-2.08	1.39	.90-2.14	
Mental Health Symptoms BASIS-24														
Depression/Functioning			3±1	.09**	.12***	-.07*	.12***			1.23**	1.06-1.43	1.30**	1.09-1.56	
Interpersonal relationships			2±1	.05	-.02	-.09**	.04			.98	.84-1.14	1.00	.83-1.20	
Self-Harm			1±1	.05	.07*	-.05	.07*			* 1.15*	1.02-1.29	1.13	.98-1.29	
Emotional Lability			2±1	.12***	.05	-.04	.04			1.01	.88-1.15	1.04	.89-1.22	
Psychosis			1±1	.09**	.03	.02	.01			.96	.84-1.10	1.07	.92-1.25	
Substance Abuse			1±1	.07*	.01	-.08*	-.01			1.12	.97-1.29	1.06	.89-1.25	
Summary Score			2±1	.12***	.09**	-.08*	.10**			1.26*	1.03-1.56	1.32	1.03-1.68	
Perceived Health SF-12														
Perceived Mental Health			31±14	-.01	-.08*	.04	-.06			.99	.98-1.00	.99	.97-1.00	
Perceived Physical Health			47±13	-.13***	-.07*	-.04	-.10***			.98*	.97 - 1.00	.98*	.97 - 1.00	

* significant .05 level;

*** significant .01 level,

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significant
'001 level.

/ Reference category precontemplation. Menthol cigarette use, employment status, and income level did not have any significant associations and are not shown. For the BASIS-24, higher scores indicate a greater number of symptoms. For the SF-12, higher scores indicate better perceived health. To prevent the interference of collinearity between scales measuring overlapping constructs, each symptom or subjective health scale was tested individually, with demographic variables included.