# Assessing secondhand tobacco smoke exposure among persons with severe and persistent mental illness Okoli, CTC., PhD, MPH; <sup>1,2</sup> Johnson, JL., PhD; <sup>2</sup> Malchy, L.<sup>2</sup>

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## Background

•Secondhand tobacco smoke (SHS) exposure increases the risk for cancer, respiratory illness, and cardiovascular disease.

 Individuals with severe and persistent mental illness (SPMI) have a higher smoking prevalence than the general population, placing them at increased risk for related morbidity and mortality.

•Given the higher smoking prevalence in this population, the risk for SHS exposure among smokers and nonsmokers with SPMI should be an issue of concern. Yet, SHS exposure in this population is understudied.

•The purpose of our study was to examine the correlates of SHS exposure in this population. Our specific aims were to:

a) Describe the frequency, sources, and feelings towards SHS exposure among individuals with SPMI accessing community mental health services

B Assess factors (i.e., gender, demographics, living situation, primary diagnosis, and substance use history) associated with SHS exposure among smokers and nonsmokers with SPMI accessing community mental health services.

### Methods

•A convenience sample was obtained by voluntary participation of individuals from the population receiving mental health services (N = 788).

•Measures included: Demographics, Primary Mental Health Diagnosis, Smoking Status, Substance Use, Sources of SHS exposure, Perceived Frequency of SHS Exposure, Number of Acquaintances who smoke

•Data Analysis included a descriptive analysis and a two-step model building procedure to determine variables to include in a logistic model assessing the correlates of perceived frequency of SHS exposure

#### Table 1. Sample Characteristics by Smoking Status

	Total Sample		Nonsmokers $(n - 416)$		Smokers $(n - 372)$		Difference*	
	n	%	n	<u>%</u>	$\frac{n}{n}$	%	р	
<i>Gender</i> $(n = 776)$							<.0001	
fale	376	48.5	145	38.6	231	61.4		
emale	400	51.5	250	62.5	150	37.5		
elationship Status (n – 775)							041	
[arried and living with spouse/common law	85	11.0	54	137	31	8 1	.0+1	
enarated/Divorced	177	22.8	80	20.4	97	25.4		
Vidowed	28	3.6	16	20.4 4 1	12	3.1		
ingle and never married	485	62.6	243	61.8	242	63.4		
$J_{\rm resc}$ (m. 701)							< 0001	
aucation (n = /8I)	25	15	10	1.0	17	4 4	<.0001	
ess than High School Education	35	4.5	18	4.6	1/	4.4		
ome high school or high school completed	332	42.5	134	34.0	198	51.2		
rade certification or Some community college/University	203	26.0	105	26.6	98	25.3		
ommunity College/University completed	211	27.0	137	34.8	/4	19.1		
ving Situation $(n = 781)$								
ve alone	415	53.1	202	51.0	213	55.3	<.0001	
ive with friends or family	214	27.4	132	33.3	82	21.3		
ive in a group home	113	14.5	42	10.6	71	18.4		
ther (for e.g. homeless, YMCA/Shelter)	39	5.0	20	5.1	19	4.9		
rimary Diagnosis (n = 729)							.004	
chizophrenia	338	46.4	152	45.0	186	55.0		
chizoaffective disorder	98	13.4	52	53.1	46	46.9		
lood	278	38.1	163	58.6	115	41.4		
nxiety	15	2.1	5	33.3	10	66.7		
erceived frequency of exposure $(n - 770)$								
w	549	713	309	78.2	240	64 0	< 0001	
oderate/high	221	28.7	86	21.8	135	36.0		
purces of exposure $(n = 788)$	206	27.6	110	20.4	102	16.0	. 0001	
here you live	296	37.6	113	28.4	183	46.9	<.0001	
the street or at a bus stop	507	64.3	290	72.9	217	55.6	<.0001	
your family's home	109	13.8	48	12.1	61	15.6	.145	
your friends homes	272	34.5	106	26.6	166	42.6	<.0001	
a drop-in center	219	27.8	99	24.9	120	30.8	.065	
a coffee shop, bar, or restaurant <sup>**</sup>	397	50.4	193	48.5	204	52.3	.284	
a park/public space	369	46.8	200	50.3	169	43.3	.052	
her (for e.g., car, school, work)	130	16.5	81	20.4	49	12.6	.003	
equaintances who smoke (n = 774)								
most none	337	43.5	254	64.6	83	21.8	<.0001	
ome	178	23.0	76	19.3	102	26.8		
bout half	85	11.0	29	7.4	56	14.7		
ost /All of them	174	22.5	34	8.7	140	36.7		
(n = 770)								
at all	243	31.6	46	11 7	197	52.4	< 0001	
little bit	166	21.6	82	20.8	84	22.4		
mewhat	131	17.0	80	20.8	51	13.6		
great deal	230	29.9	186	47.2	44	11.7		
		CD						
$\mathbf{m} \mathbf{h} \mathbf{o} \mathbf{f} = \mathbf{r} \mathbf{o} \mathbf{r} \mathbf{r} \mathbf{o} \mathbf{r} \mathbf{r} \mathbf{o} \mathbf{r} \mathbf{r} \mathbf{r} \mathbf{o} \mathbf{r} \mathbf{r} \mathbf{r} \mathbf{r} \mathbf{r} \mathbf{r} \mathbf{r} r$	Mean	SD 1.9	Mean	<u>SD</u>	Mean	SD 2.0	p	
number of sources of exposure (n = 788)	2.9 40 7	1.8	2.8 50.1	1./	3.0	2.0	.300	
ge (III years, II = $7/8$ )	48./	12.1	50.1	12.4	47.2	11.0	.003	
under of substances used in past 50 days $(n = 7/1)$	0.6	0.8	0.4	0.6	0.8	0.9	<.0001	

Note. \*Differences between nonsmokers and smokers groups is based on chi-square analyses for categorical variables and Mann-Whitney U test for and ordered categorical variables \*\* Of those reporting exposure in a coffee shop, bar, or restaurant, 5.3% of respondents were exposed *inside* the venue, 78.3% were exposed *outside* the venue, and 16.3% reported exposure both inside and outside the venue.

		Nonsmokers $(n = 361)$				$\frac{\text{Smokers}}{(n = 365)}$				
	В	S.E	Odds	95%CI	В	S.E	Odds	95%CI		
Gender										
Semale	-	-	-	-	.56	.26	1.72*	1.05-2.89		
Iale <sup>b</sup>							1.0			
Education										
less than High School Education <sup>b</sup>	-	-	-	-			1.0			
ome high school /High school					-1.14	.64	.32	.09-1.13		
Trade certification /Some college					-1.10	.67	.33	.09-1.23		
Completed College/University					95	.68	.39	.10-1.48		
Primary Diagnosis										
chizophronio	1 50	1.02	20	02 1 55	-	-	-	-		
chizoeffective disender	-1.39	1.05	.20	.03-1.33						
chizoaffective disorder	-1.29	1.08	.28	.03-2.28						
Alood	-1.75	1.03	.17	.02-1.32						
Anxiety <sup>b</sup>			1.0							
Age (in years)	01	.01	.99	.97-1.02	-			_		
ubstances used in past 30 days	.31	.22	1.37	.90-2.09	.15	.14	1.16	.89-1.51		
causintances who smoke										
Imost none b			1.0							
lomo	87	25	1.0 2.27*	1 16 1 17	83	11	2 28	07 5 37		
bout half	.02	.55	2.27	1.10-4.47	.03	.44	2.20 5.45*	.97 - 3.37		
	.30	.54	1./4	.01-4.99	1.70	.47	5.45*	2.18-13.03		
lost of them	1.72	.45	5.58*	2.29-13.57	1.90	.42	6.66*	2.95-15.03		
Jumbar of sources of exposure	12	10	1 50*	1 25 1 83	24	07	1 78*	1 12 1 46		
Note. <sup>a</sup> only variables that were significantly asso <sup>b</sup> referent group		rceived fr	requency of	exposure in the f	irst step are	e included	l in the final	model		
SHS exposure among	individu	als w	ith SP	MI may b	e an is	ssue	of publ	ic		
health concern.										
The important sources	of expo	sure	highlic	hted by p	articip	ants	in our			
study may indicate the r	need for	the e	enactr	ent and e	enforce	emen	nt of			
policies to curtall SHS e	xposure	e in ol	ltdoor	, public, s	ettings	5.				
Future research with s	ounder	meas	sures	of SHS ex	posur	e (su	ch as			
nicotino monitore hiome	rkore c	$(+ \alpha)$	max	nhanca		dorate	onding	of		
	aireis, t	÷.i.c.)	illay e			161210	anung	01		
the extent and impact of	SHS e	xposi	ure in t	this popul	ation.					
		-								
Acknowledgement:										
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traineeship

Canadian Société Cancer canadienne Society du cancer





#### Table 2. Correlates of Perceived SHS Exposure By Smoking Status

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