Outcomes of a Tailored Smoking Cessation Program for Individuals with a Substance Use and/or Psychiatric Disorder

Chizimuzo T.C. Okoli
University of Kentucky, ctokol1@uky.edu

Milan Khara
Vancouver Coastal Health Mental Health and Addictions Services, Canada

Follow this and additional works at: https://uknowledge.uky.edu/nursing_present

Part of the Nursing Commons, and the Public Health Commons

Right click to open a feedback form in a new tab to let us know how this document benefits you.

Repository Citation
Okoli, Chizimuzo T.C. and Khara, Milan, "Outcomes of a Tailored Smoking Cessation Program for Individuals with a Substance Use and/or Psychiatric Disorder" (2012). Nursing Presentations. 24. https://uknowledge.uky.edu/nursing_present/24

This Presentation is brought to you for free and open access by the College of Nursing at UKnowledge. It has been accepted for inclusion in Nursing Presentations by an authorized administrator of UKnowledge. For more information, please contact UKnowledge@lsv.uky.edu.
OUTCOMES OF A TAILORED SMOKING CESSATION PROGRAM FOR INDIVIDUALS WITH A SUBSTANCE USE AND/OR PSYCHIATRIC DISORDER

Chizimuzo Okoli, PhD, MPH, RN
Director, Tobacco Treatment and Prevention Division, Kentucky Tobacco Policy Research Program
Assistant Professor, College of Nursing, University of Kentucky
Clinical Assistant Professor, Faculty of Nursing, University of British Columbia

Milan Khara, MBChB, CCFP, cert. ASAM
Clinical Director, Tobacco Dependence Clinic,
Vancouver Coastal Health Mental Health & Addiction Services,
Clinical Assistant Professor, Faculty of Medicine, University of British Columbia
Declaration of competing interests and Acknowledgements

Dr Chizimuzo Okoli has received consultation fees from following companies/institutions in the previous 2 YEARS:

- a maker of smoking cessation medications
- a governmental service for individuals with substance use and psychiatric disorders

This study was made possible through a financial contribution from Health Canada. The views expressed herein do not necessarily represent the views of Health Canada.
SIGNIFICANCE

Kalman, Morissette and George (2005), Am. J. Addict., 14: 106-123
Arguments for Not Providing Tobacco Treatment....

“these patients don’t want to quit”

- 80% of participants in a methadone maintenance program and 75% of participants in an alcohol abuse program endorsed a desire to quit (Richter KP et al., 2001; Ellingstad TP et al, 1999)
- In a review of 9 studies of motivation to quit smoking among individuals with psychiatric disorders at least 50% are contemplating cessation (Siru, Hulse & Tait, 2009).

“these patients will relapse (to other substances) if they try to quit”

- Smoking cessation efforts can ENHANCE rather than compromise long term sobriety (Prochaska JJ et al, 2004).

“these patients are unable to quit”

- Meta-analysis (n = 19 studies) of smoking cessation among individuals in addiction treatment and recovery found increased cessation at end of 12 weeks treatment (BUT NO SIGNIFICANT EFFECT AT 6 MONTHS!) (Prochaska JJ et al, 2004).
- Recent study found end-of-treatment smoking cessation rates of 20% among individuals with psychiatric disorders accessing outpatient tobacco treatment program-Longer duration of treatment significantly predicted successful cessation.
Program Description

- The Tobacco Dependence Clinic (TDC) is a program that provides **behavioural counselling** and up to **6-7 months of no-cost pharmacotherapy** for clients through VCH Addiction Services.

- Program is run with a team of nurses, counsellors, respiratory therapists, and a physician.

- Currently in 7 Addictions services located in community health centres in Vancouver.

Eligibility:
- 19 years or older
- Tobacco dependent
- Have a history of substance use disorder and/or mental illness
- Financially disadvantaged
8-week structured group

Phase 1: engagement in the process – weeks 1-2
Phase 2: planning for change – weeks 3-4
Phase 3: sustaining change – weeks 5-8

Program philosophy: Quitting smoking is a process and not an event

Combination Pharmacotherapy

Nicotine Replacement Therapy
- Patch
- Gum
- Lozenge
- Inhaler

Oral Medications
- Zyban
- Champix
Specific Aims

• To assess program completion and smoking cessation rates at end-of-treatment

• To examine predictors of successful program completion and smoking cessation
Sample for Evaluation

- Analysis is based on a retrospective chart review of participants in the TDC program (between Sept 2007 and Dec, 2011) from 7 clinics, in Vancouver, Canada.
- Smoking cessation: 7-day point-prevalence of abstinence at end of treatment (i.e., anytime between 8 weeks to 26 weeks) verified by expired CO levels.
Substance Use Disorder & Psychiatric Disorder History
(N = 678)

- Both: 65.3%
- Substance use disorder: 21.7%
- Psychiatric disorder: 9.4%
- None: 3.5%
# Sample Characteristics (N = 678, 57% male)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Mean</th>
<th>Stand. Dev.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age of participant (years)</td>
<td>48.0</td>
<td>11.0</td>
</tr>
<tr>
<td>Age at smoking initiation (years)</td>
<td>15.1</td>
<td>5.8</td>
</tr>
<tr>
<td>Importance of quitting (scale of 0 ‘low’ to 10 ‘high’)</td>
<td>9.0</td>
<td>1.4</td>
</tr>
<tr>
<td>Confidence in quitting (scale of 0 ‘low’ to 10 ‘high’)</td>
<td>7.2</td>
<td>2.4</td>
</tr>
<tr>
<td>Number of cigarettes smoked per day</td>
<td>20.4</td>
<td>10.3</td>
</tr>
<tr>
<td>Fagerstrom Test for Nicotine Dependence (scale of 0 ‘low’ to 10 ‘high’)</td>
<td>6.0</td>
<td>2.0</td>
</tr>
<tr>
<td>CO level at baseline (ppm)</td>
<td>20.9</td>
<td>14.2</td>
</tr>
</tbody>
</table>
Program Completion (n = 523/678)

- 77.1% completed the program
- 22.9% did not complete the program
Smoking Cessation* Outcomes at end-of-treatment

*Smoking cessation at end-of-treatment (i.e., anytime between 8 weeks to 26 weeks) verified by expired CO levels.

Intent to treat (N=678)
- Quit: 32.7%
- Not quit: 67.3%

Program completers (n = 523)
- Quit: 40.3%
- Not quit: 59.7%
Smoking cessation by SUD and PD among program completers (n = 523)*

* No statistically significant differences between groups
Smoking Cessation by length of stay in the program (n = 678)*

* Statistically significant differences between groups
Multivariate predictors\textsuperscript{a} of program completion (n = 674)

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Odds Ratio</th>
<th>95%CI</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male (referent)</td>
<td>1.0</td>
<td>-</td>
</tr>
<tr>
<td>Female</td>
<td>1.78**</td>
<td>1.19-2.65</td>
</tr>
<tr>
<td>Age</td>
<td>1.03**</td>
<td>1.01-1.05</td>
</tr>
</tbody>
</table>

Hosmer-Lemeshow goodness-of-fit: $\chi^2= 1.80$ (DF=8), $p=.986$

\textsuperscript{a} Employing a two-step model building process in which variables associated with smoking cessation (at alpha < 1.0) in the unadjusted analyses are included in a second-step for adjusted analyses. Only variables which were significantly predictive of smoking cessation in the final adjusted multivariate model are shown.

* = $p < .05$, ** = $p < .001$, *** = $p < .001$
**Multivariate predictors\(^a\) of smoking cessation among program completers at end of treatment (n = 494)**

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Odds Ratio</th>
<th>95%CI</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>History of Psychiatric Disorder</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None (referent)</td>
<td>1.0</td>
<td>-</td>
</tr>
<tr>
<td>Mood disorder</td>
<td>.90</td>
<td>.57-1.42</td>
</tr>
<tr>
<td>Anxiety disorder</td>
<td>.53(^*)</td>
<td>.29-1.00</td>
</tr>
<tr>
<td>Psychotic disorder</td>
<td>.69</td>
<td>.31-1.57</td>
</tr>
<tr>
<td><strong>FTND at baseline</strong></td>
<td>.89(^*)</td>
<td>.80-1.00</td>
</tr>
<tr>
<td><strong>Number of Visits to the TDC</strong></td>
<td>1.07(^***)</td>
<td>1.04-1.10</td>
</tr>
</tbody>
</table>

Hosmer-Lemeshow goodness-of-fit: $\chi^2 = 3.45$ (DF=8), $p = .903$

\(^a\) Employing a two-step model building process in which variables associated with smoking cessation (at alpha < 1.0) in the unadjusted analyses are included in a second-step for adjusted analyses. Only variables which were significantly predictive of smoking cessation in the final adjusted multivariate model are shown.

\(^*\) = p <.05, \(^*\) = p <.001, \(^***\) = p <.001
Conclusions

• The Tobacco Dependence Clinic provides an innovative model of tailored tobacco dependence treatment which combines behavioural counselling with no-cost pharmacotherapy for individuals with a history of substance use and/or psychiatric disorders for up to 6 months.

• With intensive tobacco dependence treatment provided within Mental Health and Addictions services, individuals with a history of substance use and/or psychiatric disorders are able to achieve smoking abstinence.
Smoking Cessation Outcomes among Individuals with Substance Use and/or Psychiatric Disorders

Milan Khara and Chizimuzo T.C. Okoli

Tobacco Dependence Clinic, Vancouver Coastal Health Authority, Pacific Spirit CHC, Canada
Assistant Professor, University of Kentucky, 2315 College of Nursing, Lexington, KY 40530, USA

Abstract

Objectives: The population of individuals with substance use (SUD) and/or psychiatric disorders (PD) has a high prevalence of smoking and a consequent increase in tobacco-related morbidity and mortality when compared to the general population. The aim of this study is to examine the outcomes of a program in a real-life setting which takes a tailored approach to smoking cessation among individuals with SUD and/or PD.

Methods: A retrospective chart review of tailored tobacco dependence treatment was performed on individuals with histories of SUD and/or PD attending a Tobacco Dependence Clinic (TDC) program in Vancouver, British Columbia, Canada. Participants of the TDC received a combination of behavioural counselling and pharmacotherapy for smoking cessation. Data from 540 participants enrolled in the TDC between September 2007 and May 2011 was reviewed. Outcome measures included seven-day point-prevalence abstinence (validated by expired carbon monoxide) and program completion rates.

Results: For individuals who completed the program the abstinence rate was 41.1% (187/408). Significant predictors of successful smoking cessation were: a) a lower expired carbon monoxide level at baseline (OR=.98, 95%CI=.96-1.00), and b) a longer duration of treatment (OR=1.09, 95%CI=1.05-1.12). Significant predictors of program completion were: a) being female (OR=1.86, 95%CI=1.21-2.87).

Discussion: Tailored smoking cessation among individuals with SUD and/or PD yields modest end-of-treatment smoking cessation rates and can be an effective approach to reducing the burden of tobacco use in substance use and mental health treatment settings.