The Tobacco Dependence Clinic: Gender Issues and Possibilities in Cessation Treatment

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

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

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Chizimuzo Okoli and Milan Khara
iTAG 2012 Annual Spring Meeting
Background & Significance

From Kalman, Morissette and George (2005), Am. J. Addict., 14: 106-123
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 Mental Health and 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
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
Aims

• To examine sex/gender differences in factors associated with substance use, psychiatric disorders, and smoking among participants of the TDC program

• To examine predictors of program completion and smoking cessation among participants of the TDC program
Sample

1004
Participated in Program
(Sept 2007 to Dec 2010)

326
- 80 Repeat clients
- 246 Not engaged in the program (i.e., had two or less contacts with the program)

678*
Intent to treat

155 (22.9%)  
Male: 25.6%  
Female: 18.8%  
Program non-completers

523 (77.1%)  
Male: 74.4%  
Female: 81.2%  
Program completers

*Three individuals selected ‘other’ in response to gender and were not included in analyses
Substance Use Disorder & Psychiatric Disorder History (N = 675)

- **Both**: 65.2% (Total), 63.6% (Male), 67.5% (Female)
- **Substance use only**: 21.8% (Total), 25.4% (Male), 16.6% (Female)
- **Psychiatric only**: 9.5% (Total), 6.3% (Male), 14.1% (Female)
- **Neither**: 3.6% (Total), 1.8% (Female)
### Table 1. Baseline Characteristics (N = 678)

<table>
<thead>
<tr>
<th></th>
<th>Women</th>
<th></th>
<th>Men</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Age of participant (years)</strong></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td></td>
<td>44.3</td>
<td>11.1</td>
<td>50.7</td>
<td>10.1</td>
</tr>
<tr>
<td><strong>Cigarettes smoked per day</strong></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td></td>
<td>18.7</td>
<td>8.6</td>
<td>21.6</td>
<td>11.3</td>
</tr>
<tr>
<td><strong>Age at smoking initiation</strong></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td></td>
<td>14.4</td>
<td>4.8</td>
<td>15.6</td>
<td>6.4</td>
</tr>
<tr>
<td><strong>Importance of quitting</strong></td>
<td>Scale</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(scale of 0 ‘low’ to 10 ‘high’)</td>
<td>9.0</td>
<td>1.3</td>
<td>9.0</td>
<td>1.4</td>
</tr>
<tr>
<td><strong>Confidence in quitting</strong></td>
<td>Scale</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>(scale of 0 ‘low’ to 10 ‘high’)</td>
<td>7.0</td>
<td>2.4</td>
<td>7.4</td>
<td>2.4</td>
</tr>
<tr>
<td><strong>FTND at Baseline</strong></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td></td>
<td>5.8</td>
<td>2.0</td>
<td>6.1</td>
<td>2.0</td>
</tr>
<tr>
<td><strong>CO level</strong></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td></td>
<td>19.5</td>
<td>12.4</td>
<td>21.8</td>
<td>15.1</td>
</tr>
</tbody>
</table>

**Note.** **indicates significant gender differences
Program Completion (n = 675)

* Statistically significant differences by gender
Smoking Cessation* Outcomes at end-of-treatment (n = 521)

*Smoking cessation at end-of-treatment (i.e., anytime between 8 weeks to 26 weeks) verified by expired CO levels
Smoking cessation by SUD and PD among program completers (n = 521)*

* No statistically significant differences between groups
Smoking Cessation by length of stay in the program (n = 675)*

* Statistically significant differences between week categories in total sample and by gender
Smoking Cessation by type of group cohort (n = 523)*

* No Statistically significant differences between groups
Multivariate predictors\textsuperscript{a} of program completion (n = 675\textsuperscript{b})

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Total Sample</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Odds Ratio</td>
<td>95% CI</td>
<td>Odds Ratio</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Male (referent)</td>
<td>1.0</td>
<td>-</td>
<td>--</td>
</tr>
<tr>
<td>Female</td>
<td>1.78\textsuperscript{**}</td>
<td>1.19-2.65</td>
<td></td>
</tr>
<tr>
<td>Age</td>
<td>1.03\textsuperscript{**}</td>
<td>1.01-1.05</td>
<td>1.03\textsuperscript{**}</td>
</tr>
<tr>
<td>Importance to quit</td>
<td>-</td>
<td>-</td>
<td>-</td>
</tr>
</tbody>
</table>

\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.

\textsuperscript{b} Analysis includes repeat clients to the TDC

\( * = p < .05, \quad ** = p < .001, \quad *** = p < .001 \)


Multivariate predictors\(^a\) of smoking cessation among program completers at end of treatment (n = 494)

<table>
<thead>
<tr>
<th>Predictors</th>
<th>Total Sample</th>
<th>Males</th>
<th>Females</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Odds Ratio</td>
<td>95% CI</td>
<td>Odds Ratio</td>
</tr>
<tr>
<td>History of PD</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>None (referent)</td>
<td>1.00</td>
<td>-</td>
<td>1.00</td>
</tr>
<tr>
<td>Mood</td>
<td>.86</td>
<td>.55-1.36</td>
<td>.68</td>
</tr>
<tr>
<td>Anxiety</td>
<td>.53*</td>
<td>.28-1.00</td>
<td>.41*</td>
</tr>
<tr>
<td>Psychotic</td>
<td>.64</td>
<td>.28-1.45</td>
<td>.28*</td>
</tr>
<tr>
<td>FTND</td>
<td>.89*</td>
<td>.80-.99</td>
<td>.88*</td>
</tr>
<tr>
<td>Total Visits</td>
<td>1.07***</td>
<td>1.03-1.10</td>
<td>1.08***</td>
</tr>
</tbody>
</table>

\(a.\) 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.

\(\ast = p < .05, \ast\ast = p < .001, \ast\ast\ast = p < .001\)
Summary of Key Findings

• Associations with gender:
  o Women were more likely to have a history of a mental illness and complete the program.
  o Men were more likely to have a substance use disorder, be older, smoke more cigarettes per day, and have greater confidence in their ability to quit.

• Associations with smoking cessation in stratified analysis:
  o Among men, poor smoking cessation was associated with having an anxiety or psychotic disorder (as compared to no psychiatric disorder), higher nicotine dependence at baseline, and less visits to the program.
  o Among women, poor smoking cessation was associated with less visits to the program.