Objective 2: To identify mental health variables that predict suicide risk among patients with three completed health assessments over twelve months.

We examined the impact of integrated medical services in a large outpatient mental health clinic. A quasi-experimental design was used to assess the impact of an Integrated Care Treatment Team, and free health education classes (e.g., Tobacco Awareness) designed to improve health literacy.

Objectives

Objective 1: To identify mental health variables that predict suicide risk among individuals with a history of self-harm or suicide attempt.

Objective 2: To examine behavioral health factors (i.e., tobacco use) among patients with psychiatric conditions and history of self-harm or suicide attempt.

Methods

Participants were drawn from a larger sample of patients who completed a 12-month integrated medical and behavioral health program (N=316), in an outpatient community mental health clinic.

• Medical Screenings (Baseline, 6-months, 12-months)
  - Carboxy monoxide (CO >5 indicative of tobacco use)
  - SAMHSA NOMS Client - level measures
  - Demographics (e.g., gender, age, ethnicity)

Tobacco use: endorsement of tobacco use in past 30 days, on a 5-point Likert Scale used to assess personal confidence and hope (0=Never – 4=Daily, Almost Everyday)

Kessler Psychological Distress Scale (K6; Kessler et al., 2012): 6-item (e.g., hope, restless) tool on a 5-point Likert Scale used to assess serious mental illness (0=Never – 4=Daily. All the time). Total score (0-24) of greater than 12 is considered a serious Psychological Distress

The Recovery Assessment Scale (RAS; Giftor et al., 1995), assesses five dimension of mental health recovery:
  - Personal confidence and hope (e.g., I can handle what happens in my life)
  - Willingness to ask for help (I ask for help when I need it)
  - Goal and success orientation (e.g., I have a desire to succeed)
  - Reliance on others (e.g., I have people I can count on)
  - Not dominated by symptoms (e.g., coping with mental illness is no longer the main focus of my life)

Results of those with history of Self-Harm or Suicide Attempts

• Among the entire cohort of program completers (N=316), we analyzed a subsample of patients (n=110; 34%) who endorsed lifetime history of self-harm or suicide attempt (“Have you ever tried to hurt yourself?”), at baseline enrollment into the integrated health care program.
  - Most patients were female (67%), Hispanic (81%), and between the ages of 45 and 64 year-old (68%)
  - Average baseline scores for Psychological Distress (M=11.35, SD=6.09) approached range considered Serious Psychological Distress (K6 Sum > 12)

Predictors of Suicide Risk

• Of program completers who endorsed a lifetime history of suicide attempts or self-harm (N=110), 12% (n=13) endorsed suicide ideation, and 4.5% (n=5) endorsed experience of suicide attempt over the previous 12 month period, at 6 month and 12 month follow-up assessments

• More severe levels of baseline Psychological Distress (K6 sum) significantly predicted cases of suicidal ideation (F[1,103]=6.98, p=0.010) and incidence of suicide attempt (F[1,107]=6.07, p=0.026) over the ensuing 12 months.

• To determine to what extent the five dimensions of the Recovery Assessment Scale (at baseline) predicted suicidality over the 12-months in the integrated health care program, a series of regressions were performed (Table 2).

Suicidality = Baseline RAS Subscales

<table>
<thead>
<tr>
<th>B</th>
<th>S.E.</th>
<th>B</th>
<th>t</th>
<th>p</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ideation</td>
<td>Personal Confidence &amp; Hope</td>
<td>-0.02</td>
<td>0.01</td>
<td>-0.24</td>
</tr>
<tr>
<td></td>
<td>Goal &amp; Success Orientation</td>
<td>-0.02</td>
<td>0.01</td>
<td>-0.20</td>
</tr>
<tr>
<td></td>
<td>Willingness to Ask for Help</td>
<td>0.01</td>
<td>0.02</td>
<td>0.04</td>
</tr>
<tr>
<td></td>
<td>Reliance on Others</td>
<td>-0.02</td>
<td>0.01</td>
<td>-0.18</td>
</tr>
<tr>
<td></td>
<td>No Domination by Symptoms</td>
<td>-0.02</td>
<td>0.01</td>
<td>-0.21</td>
</tr>
<tr>
<td>Suicide</td>
<td>Personal Confidence &amp; Hope</td>
<td>-0.01</td>
<td>0.00</td>
<td>-0.23</td>
</tr>
<tr>
<td></td>
<td>Goal &amp; Success Orientation</td>
<td>-0.01</td>
<td>0.00</td>
<td>-0.24</td>
</tr>
<tr>
<td></td>
<td>Willingness to Ask for Help</td>
<td>0.00</td>
<td>0.01</td>
<td>-0.02</td>
</tr>
<tr>
<td></td>
<td>Reliance on Others</td>
<td>-0.01</td>
<td>0.01</td>
<td>-0.15</td>
</tr>
<tr>
<td></td>
<td>No Domination by Symptoms</td>
<td>-0.03</td>
<td>0.01</td>
<td>-0.17</td>
</tr>
</tbody>
</table>

Results Continued

Table 3. Recovery Assessment Scale (RAS): Comparison of Baseline and 12-Month RAS Subscale Scores, N=106

<table>
<thead>
<tr>
<th>Parameter</th>
<th>RAS Subscales</th>
<th>Baseline</th>
<th>12-Months</th>
<th>p-value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Personal Confidence &amp; Hope</td>
<td>24.73 (5.08)</td>
<td>26.79 (3.92)</td>
<td>&lt;0.001</td>
<td></td>
</tr>
<tr>
<td>Goal &amp; Success Orientation</td>
<td>18.51 (3.80)</td>
<td>20.09 (2.70)</td>
<td>&lt;0.001</td>
<td></td>
</tr>
<tr>
<td>Willingness to Ask for Help</td>
<td>11.61 (1.91)</td>
<td>12.26 (1.51)</td>
<td>0.002</td>
<td></td>
</tr>
<tr>
<td>Reliance on Others</td>
<td>14.92 (2.44)</td>
<td>15.67 (2.48)</td>
<td>0.003</td>
<td></td>
</tr>
<tr>
<td>No Domination by Symptoms</td>
<td>9.04 (2.86)</td>
<td>10.36 (2.46)</td>
<td>&lt;0.001</td>
<td></td>
</tr>
</tbody>
</table>

Tobacco Use

• Of the 110 patients with history of self-harm or suicide attempt, 19% (n=21) endorsed tobacco use at baseline enrollment into the integrated care program
  - Most tobacco users (76%) reported "daily or almost daily" use
  - Health risk associated with exposure to tobacco smoke (Carbon Monoxide > 6ppm) was significantly associated with higher baseline RAS subscale scores for Personal Confidence and Hope (r=0.34, p=0.015), and Goal and Success Orientation (r=0.37, p=0.013)

Interventions

• The item, "Are you interested in free help to reduce or quit smoking?" was added to the baseline, 6-month, and 12-month assessment survey as a strategy to identify smokers and connect/refer them to available services.
  - An on-site tobacco treatment specialist offers individual consultations and assessments, 1:1 brief counseling for tobacco use disorder, and a weekly "Tobacco Awareness" class (psycho-educational and motivational enhancement)

Conclusions

• These results suggest that integrated care programs can positively impact the mental health recovery of patients with SMI. These were significant improvements observed in areas of mental health recovery that are commonly associated with suicide risk. Therefore, Integrated Care Models may be effective in serving individuals at risk of suicidality. Specific interventions for this population should target hopefulness, self-efficacy, and symptom severity/impact on quality of life.
  - Findings support the need for screening and intervention for tobacco use among patients with history of self-harm or suicide.
  - Behavioral Health staff should be trained in smoking cessation interventions

Future Directions

• These results are preliminary outcomes of a behavioral health program that incorporated primary care services into a mental health setting, with a specific focus on those with a history of suicidality, including those with tobacco use. Further analysis is needed to better understand the specific components of the integrated care model which lead those with a history of suicidality to show improvement in mental health recovery. Further analysis is also needed to see what impact did the integrated care program have on the physical health of this population.

Contact

Marc S. Budgazad, MA
NYU Langone Medical Center
Marc.Budgazad@nyumc.org

© 2022 Marc Budgazad, PhD. All rights reserved.