Improving Quality of Life and Symptom Management among patients with Bipolar Disorder Type 1: Education about use of a monthly anti-psychotic injectable medication

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Background
- Bipolar disorder (BD) is a serious mental illness
- BD is a chronic condition that affects social, occupational, and interpersonal functions (Yutzy, Woofter, Abbott, Melhem, & Parish; 2012)
- Individuals with BD die 25 years earlier (NAMI; 2018)
- Number of patients with BD is growing rapidly
- Oral medication is widely used to treat BD patients (Pomerantz; 2005)
- Positive patient outcomes (i.e. good quality of life and good symptom management) are not achieved due to high rates of medication non-adherence (NAMI; 2018)
- Injectable medication may improve medication adherence and clinical outcomes in BD patients (Park et al; 2018)

Study Purpose and Aims
The purpose of this project was to evaluate the effectiveness of education about and use of a monthly anti-psychotic injectable medication on quality of life (QoL) and symptom management in patients with BD.

Project Aims:
1. To improve the QoL among patients with BD by educating them about and administering a once a month long-acting injectable anti-psychotic medication
2. To decrease the rates of manic and psychotic symptoms in patients with BD by educating them about and administering a once a month long-acting injectable anti-psychotic medication
3. To decrease in-patient hospitalization occurrences in patients with BD by educating them about and administering a once a month long-acting injectable anti-psychotic medication

Methods
The project was done using a pre-post intervention design
Setting: Outpatient clinic in the western United States
Participants: (1) Adult patients aged 18 to 65 years old who met DSM-V criteria for Bipolar Disorder type I; (2) Providers at the clinic were asked to participate in the educational session
Measures: (1) Quality of Life in Bipolar Disorder scale (QoL.BD); (2) General Behavior Inventory scale (GBI); (3) inpatient hospitalizations
Evidence based intervention: (1) Education session for patients and providers that described the risks, side effects, and benefits of long-acting injectable medication for patients with BD (week 1); (2) 3 monthly injections of the long-acting injectable, anti-psychotic medication aripiprazole given at weeks 2, 6, & 10
Survey Instrument: Surveys that included demographic items, illness related items, QoL.BD (56-item scale), and GBI (73-item scale) were administered through Survey Monkey at week 1 and week 12
Data Analysis: SPSS version 25 was used for all analysis and a p-value < 0.05 was used to determine statistical significance

Sample Characteristics
18 participants were recruited for project participation; all participants completed the 1st injection, 17 (94.4%) completed the 2nd injection, 14 (77.8%) completed the 3rd injection:

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>(N=14)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age, median (IQR)</td>
<td>33.5 (23.25)</td>
</tr>
<tr>
<td>Male, n (%)</td>
<td>7 (50)</td>
</tr>
<tr>
<td>Race, n (%)</td>
<td></td>
</tr>
<tr>
<td>African American</td>
<td>3 (21.4)</td>
</tr>
<tr>
<td>Asian</td>
<td>4 (28.6)</td>
</tr>
<tr>
<td>Caucasian</td>
<td>5 (35.7)</td>
</tr>
<tr>
<td>Hispanic</td>
<td>2 (14.3)</td>
</tr>
<tr>
<td>≥12th grade education level, n (%)</td>
<td>9 (57.1)</td>
</tr>
<tr>
<td>Employed, n (%)</td>
<td>6 (42.9)</td>
</tr>
<tr>
<td>Past incarceration, n (%)</td>
<td>4 (28.6)</td>
</tr>
<tr>
<td>Number of years with bipolar disorder, median (IQR)</td>
<td>6.50 (13.0)</td>
</tr>
<tr>
<td>Number of oral medications tried, median (IQR)</td>
<td>3.5 (2.35)</td>
</tr>
</tbody>
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Results
Aim 1: Participants had significantly higher quality of life after the intervention than before the intervention (mean QoL.BD score of 100 vs. 134.8, difference = 34.8, t(13) = 4.46, p<0.001)

Aim 2: Participants had significantly fewer symptoms after the intervention than before the intervention (median GBI score 3.0 vs. 1.0, difference = 2, Z = 3.21, p = 0.0001)

Aim 3: The rate of hospitalizations did not significantly differ between pre and post intervention (50% vs. 21.4%, p = 0.13)

Conclusions
Education about and use of a once a month long-acting injectable antipsychotic medication improves quality of life, reduces symptoms, and reduces inpatient hospitalizations in patients with BD

Dissemination
- Report to Alameda County Behavioral Health
- Poster presentation at APNA’s 2020 national conference
- Journal article submitted to the Journal of the American Psychiatric Nurses Association (JAPNA)