Diabetes Management Interventions in Patients with Schizophrenia: An Integrative Review of the Literature

Angelica Leon
angelicaleon10@gmail.com

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Background and Significance
In the United States there are 9.8 million people who suffer with a serious mental illness. Over half of these patients fall within the description of also having a comorbidity, making diseases such as diabetes, cardiovascular disease, and pulmonary disease more prevalent among those with mental illness. Among those with schizophrenia, a higher incidence of diabetes occurs in comparison to the population at large. This higher prevalence is multifactorial with can be due to life-style factors, psychosocial factors, as well as the increased risk for metabolic syndrome in those taking atypical antipsychotics. This makes managing diabetes among those with schizophrenia increasingly difficult. A higher prevalence of diabetes in patients with schizophrenia warrants a closer look at the current interventions in the literature.

Purpose
The purpose of this integrative literature review is to explore health interventions in patients with both schizophrenia and diabetes or at risk as well as to evaluate their effectiveness in diabetes management or metabolic syndrome management.

Research Questions
1. What health interventions exist that specifically target patients with schizophrenia and diabetes and its risk factors?
2. How effective are these initiatives in managing diabetes or its risk factors?

Conceptual Framework
The conceptual framework used was Nola Pender’s Health Promotion model. Using Pender’s health promotion model, both diabetes and schizophrenia can be viewed as personal factors.

Summary of Findings in the Literature
From the articles found there was one intervention utilizing peer focused technology, three interventions focusing on exercise programs alone, one intervention focusing on diet alone, one utilizing cognitive behavioral therapy and twelve interventions using mixed health promotion programs. Mixed health promotion programs included: counseling, therapy, dietary guidance, and exercise promotion.

Implications for Future Nursing
As the field of nursing and healthcare moves towards a more integrative approach, psychiatric nurses will have to be conscious of the effect physical illness has on their patients. The disability that physical illness adds to the already chronic nature of mental illness needs to be considered when developing a holistic plan of care for patients with chronic mental illness such as schizophrenia. This literature review acts as a broad overview of the current interventions that can be used and modified for patients with mental illness.

Methods
This study uses an integrative literature review method to look at the current knowledge and understanding on how to effectively manage diabetes in patients with schizophrenia using various interventions.

The following databases were used to search the appropriate concepts: Psych Info, The Cumulative Index to Nursing and Allied Health Literature (CINAHL) Complete, ProQuest and Nursing & Allied Health Database.

The concepts searched include: schizophrenia, diabetes, metabolic syndrome, and interventions.

Findings

<table>
<thead>
<tr>
<th>Findings</th>
<th>Number of studies</th>
</tr>
</thead>
<tbody>
<tr>
<td>Used biometrics (BMI, HbA1c, weight, Weight Circumferance)</td>
<td>15</td>
</tr>
<tr>
<td>Used survey only</td>
<td>3</td>
</tr>
<tr>
<td>Showed Decrease in Diabetes Symptoms (Biometric)</td>
<td>3</td>
</tr>
<tr>
<td>Showed no significant change in intervention used</td>
<td>12</td>
</tr>
<tr>
<td>Sample from outpatient clinics</td>
<td>12</td>
</tr>
<tr>
<td>Sample from residential facility</td>
<td>2</td>
</tr>
<tr>
<td>Studies conducted in the United States</td>
<td>5</td>
</tr>
</tbody>
</table>

Conclusion
This review evaluated the current literature and programs used manage dual diagnosis in those with schizophrenia and diabetes. Although results were mixed from the interventions found, future studies should continue to look at the importance of managing attrition rates in interventions used within the mental health community. Future studies can also take away from what factors in those interventions that contributed towards lowering diabetes risk factors.

Contact Info
Angelica Leon
angelicaleon10@gmail.com