A Student Organization and Peer Support Impacts College Students’ Health and Wellness: Diabetes Exemplar

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Disclosure

• The author of this presentation, Jennifer Saylor, Assistant Professor at the University of Delaware states that there is no conflict of interest and there was no sponsorship or commercial support given to the author regarding this presentation.
Background: Increase in T1DM

- 2001-2009: 21% increase in people under age 20\textsuperscript{1,2}
- 5 million people in the U.S. are expected to have T1DM by 2050, including nearly 600,000 youth\textsuperscript{1,3}
- Estimated 53,000 students with T1DM attending colleges/universities in the US\textsuperscript{4}
- Term “Juvenile diabetes” no longer used
- Adults are being diagnosed with T1DM
Background: College Life with T1DM

• 71% of college students report having difficulty managing their diabetes
• Students report that diet, irregular schedules, and alcohol consumption affects glycemic control
• Social support, more specifically, peer networks can increase a sense of belonging and strengthen academic and social development

5
College Diabetes Network (CDN): Registered Student Organization

• Non-profit organization specifically for college students with T1DM
• Mission: “singularly focused on providing young adults with T1DM the peer connections they value, and expert resources they need, to successfully manage the challenging transition to independence at college and beyond”
• Approximately 115 student-led CDN chapters with affiliated membership on college campuses
• 2,243 students with general membership
• Unique School of Nursing partnership
CDN Membership

• CDN membership for students with diabetes
  – **General membership:** Free, Internet based membership, registration includes voluntarily providing basic demographic, school, diabetes-related, and general health information; access to the educational materials, links to resources, newsletter, and two-way connection to the CDN website and staff
  – **Affiliated membership:** All general membership benefits and active participation in a student-led affiliated CDN Chapters on their college campus
    • Registered student organization with a university that holds meetings/events throughout the school year
Purpose

• To examine the characteristics and health outcomes of college students with T1DM as it relates to CDN affiliated membership in a local university-based diabetes student organization.
Research Questions

• Are there significant differences in perceived health outcomes (and hypoglycemic events) between college students who are CDN affiliated members of university-based diabetes student organizations compared to those who are CDN general members?
• Are there significant differences in perceived mental well-being outcomes (isolation, anxiety, depressive symptoms, and burnout) between college students who are CDN affiliated members of university-based diabetes student organizations compared to those who are CDN general members?
Design and Methods

• Descriptive, correlational research design using secondary data
• Survey: designed to assess the psychosocial health outcomes of the young adult T1DM population in CDN and CDN’s “Chapter Network” program for affiliated members
  – Impact of peer support: physical and mental health
• Data collection: April 3rd-24th, 2017 using an electronic diabetes management survey
  – Students received 2 reminders 1 week apart
Sample

• Purposeful: CDN members who were identified as “student” in the CDN database

• Enrolled using standard methods of communication between CDN and its membership -- email, Facebook page, Twitter feed, and quarterly newsletter

• Nationally representation: college students with T1DM (n = 317) between 18-30 years of age who were a CDN member (general or affiliated)
  – 532 completed the survey, but 58 were not currently enrolled in college, 90 did not have T1DM, and 13 were duplicate responses
Data Collection

• Pilot tested survey: small group of staff and general CDM members to determine content validity and output data

• Compiled list of CDN members received the survey via FormAssembly (Routine method of survey administration)
  – Secure, encrypted, web-based application for database creation
  – HIPPA compliant program has real-time validation rules (with automated data type and range checks) to improve accuracy of data entry.
  – Interested respondents could enter to receive an Amazon gift cards
    • Computer generated random selection
Analysis

• Descriptive analyses
• Chi-square tests of significance compared the responses of study participants who were CDN general members and affiliated members
• Fisher’s exact test used to compare the groups with low cell counts
• A priori significance level - $p < .05$
• SAS/STAT® software, version 9.4
## Results

College students (18-25) who are members of the College Diabetes Network (CDN)

<table>
<thead>
<tr>
<th>Characteristic</th>
<th>Total N (%)</th>
<th>CDN General Member N (%)</th>
<th>CDN Affiliated Member N (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Year in School</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Freshman</td>
<td>80 (22%)</td>
<td>51 (14%)</td>
<td>29 (8%)</td>
</tr>
<tr>
<td>Sophomore</td>
<td>81 (22%)</td>
<td>58 (16%)</td>
<td>23 (6%)</td>
</tr>
<tr>
<td>Junior</td>
<td>85 (23%)</td>
<td>64 (17%)</td>
<td>21 (6%)</td>
</tr>
<tr>
<td>Senior</td>
<td>78 (21%)</td>
<td>54 (15%)</td>
<td>24 (6%)</td>
</tr>
<tr>
<td>Graduate/other</td>
<td>46 (12%)</td>
<td>17 (5%)</td>
<td>29 (8%)</td>
</tr>
<tr>
<td><strong>Region of School</strong></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>International</td>
<td>5 (0%)</td>
<td>1 (1%)</td>
<td>4 (1%)</td>
</tr>
<tr>
<td>Midwest</td>
<td>104 (19%)</td>
<td>72 (9%)</td>
<td>32 (28%)</td>
</tr>
<tr>
<td>Northeast</td>
<td>105 (20%)</td>
<td>75 (9%)</td>
<td>30 (28%)</td>
</tr>
<tr>
<td>South</td>
<td>112 (19%)</td>
<td>70 (11%)</td>
<td>42 (30%)</td>
</tr>
<tr>
<td></td>
<td>45 (7%)</td>
<td>26 (5%)</td>
<td>19 (12%)</td>
</tr>
</tbody>
</table>
Results

• Participants involved with affiliated CDN Chapters were significantly:
  – Less likely to report feelings of anxiety related to their T1DM ($\chi^2 = 53.4$, $p < .0001$)
  – More likely to report college accommodations ($\chi^2 = 6.3$, $p = .0012$)

• No statistical difference found between CDN affiliated and general members experiencing barriers to insulin administration.
Results

Since joining CDN/starting college my level of isolation has.....

χ² = 73.0, p < .0001

- Affiliated
  - Decreased significantly: 22.10%
  - No change: 4.50%
  - Increased significantly: 73.40%

- General
  - Decreased: 26.77%
  - No change: 21.28%
  - Increased: 51.95%
Results

Since joining CDN/starting college my hypoglycemic events have:

**Affiliated**
- Decreased significantly: 6.10%
- No change: 12.70%
- Increased: 81.20%

**General**
- Decreased: 43.31%
- Increased: 39.32%
- Increased significantly: 17.37%

Fisher’s Exact p-value <.0001
Results

Since joining CDN/starting college my HgbA1C level has:

χ² = 101.7, p < .0001
Results

Since joining CDN/starting college my feeling of depression has:

\[
\chi^2 = 38.8, \ p-value < 0.0001
\]

- **Affiliated**
  - Decreased significantly: 5.15%
  - No change: 47.52%
  - Decreased: 47.33%

- **General**
  - Decreased significantly: 32.37%
  - No change: 11.79%
  - Increased: 55.84%
Conclusion

• A university-based diabetes student organization may experience health benefits
  – Decreased feelings of isolation, depressive and anxiety
• Access to a peer-network on campus experienced greater diabetes-related stability
• University-based diabetes student organizations may give students the ability to
  – Feel less different from their peers without diabetes
  – Offer existential space
  – Emotional connection to accept themselves
  – Integrate T1DM into their personal sense of self.
Conclusion

• More research focused on peer education may improve the health and mental-well being of young adults with T1DM
• Faculty, health care providers, and diabetes educators can assist college students to identify resources, such as CDN, that may assist students to enablers or barriers for effective diabetes education and management
• University-based diabetes student organizations can play a key role in a college student’s diabetes care team as students assume greater responsibility for their ongoing diabetes management
References


4. Roth, C. Supporting young adults with diabetes: changing systems to address the issues. American Association for Diabetes Educators 2014 Annual Meeting & Exhibition; August, 2014; Orlando, FL.


https://collegediabetesnetwork.org/
Thank you!

- Sara Lee, MD
  – Department of Pediatrics, Case Western Reserve University School of Medicine
- Michelle Ness, MSN, RN, NCSN
  – PhD Student, School of Nursing, University of Delaware,
- Jodie M. Ambrosino, PhD
  – Department of Pediatrics, Yale University School of Medicine
- Emily Ike, MS
  – Program Director, The College Diabetes Network
- Melissa Ziegler, PhD
  – University of Delaware, College of Health Sciences, Biostatistics Core
- Christina L. Roth
  – CEO & Founder, The College Diabetes Network
- Christina Calamaro, PhD, APRN
  – Director of Research, Children’s Healthcare of Atlanta