

Nursing Education Research Conference 2018 (NERC18)

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

Jennifer L. Saylor, PhD, APRN, ACNS-BC

School of Nursing, University of Delaware, Newark, DE, USA

Emily Ike, MA

College Diabetes Network, Boston, MA, USA

College Campus Living with a Chronic Condition

In the United States, 20% of youth have a chronic medical condition or special health care need (Health Resources Services Administration, 2016). With rapid advances in medicine, young adults with chronic conditions are living longer, attend college at a higher rate, and develop into successful adults. Students with a chronic condition have impaired health related quality of life (QOL) compared to those without a chronic condition and a higher level of loneliness/isolation (Herts, Wallis, & Maslow, 2014). Surprisingly, only 7% of first year college students with chronic conditions knew another student with a chronic illness and 57% reported not knowing anyone with chronic illness (Herts, Wallis, & Maslow, 2014). Fortunately, some universities have student organizations with a medical focus, including Chronic Illness Advocates, Active Minds, Lori's Hands, and College Diabetes Network. These organizations may help college students with a chronic illness adjust to college living. However, to the authors knowledge, no research exists on membership in a disease specific organizations and its impact on student health outcomes or college experience.

Collaborative Practice: University School of Nursing and a Non-profit Organization

A collaboration between a faculty member in a school of nursing at a university, and a diabetes non-profit organization The College Diabetes Network (CDN) began with a common interest of improving the college experience and beyond for young adults with type 1 diabetes (T1D). This is best achieved through student organization membership, educational materials for patients and their families, and dissemination of data-based research to the healthcare community. This evolving collaboration yielded a study examining the impact of involvement in a student organization (CDN chapters) and physical and mental health outcomes.

College Campus Living with a Chronic Disease: Type 1 Diabetes

T1D is becoming more common in the United States. Between 2001 and 2009 there was a 21% increase in the prevalence of T1D in people under age 20 (Centers for Disease Control and Prevention, 2014; Dabelea et al., 2014) In the U.S., 5 million people are expected to have T1D by 2050, including nearly 600,000 youth (Dabelea et al., 2014; Imperatore, et al., 2012). At any given time, there are an estimated 53,000 college students with T1D in the United States (Roth, 2014). However, no specific data on prevalence in this age group is available, as research is lacking in this population.

Many young adults without a chronic condition have difficulty adjusting to this campus living and balancing academic, social life, and psychological well-being. This balancing act is even more complex for students with T1D who require vigilant self-management that includes consistent insulin administration, proper nutrition, physical activity, and sleep patterns. Unlike other diseases, 95% of diabetes management decisions are made by the patient. A qualitative study in Denmark of young adults found a need for peer support emerged from students feeling loneliness from a diabetes perspective (Joensen, Filges, & Willaing, 2016). The newfound freedom of independent living, and loss of prior peer support from high school coupled with the intensive management requirements of diabetes can be the perfect storm.

Management of hemoglobin A1c (HbA1c) levels, daily blood glucose management, and fear of complications, on top of college living, can be an extraordinary amount of pressure. In addition to day to day management decisions, there are a variety of other factors that must now be balanced without the assistance of a parental support system. These include knowing the affect blood glucose on exercise, when it is not safe to drive, the effects of alcohol on blood glucose levels, managing illnesses, ordering diabetes supplies, making doctors' appointments, and even keeping track of insurance claims.

Other challenges faced by these students include the effect of high/low blood sugar on cognitive function, classroom accommodations, dining, and housing. As with other chronic conditions, mental health must not be overlooked. Of 150 teens and young adults (ages 11 to 25 years) with T1D, Soren and Grey (2015) found depression and anxiety (11% and 21%, respectively) among the participants and 20% had disordered eating. Teens and young adults with mental health issues are twice as likely to have poor diabetes control, putting them at risk of both short and long term complications.

Diabetes Registered Student Organization

Started in 2009, the College Diabetes Network (CDN) is a non-profit organization that provides information and resources to young adults with T1D, as well as access to peer support. Their "mission is to provide innovative peer based programs which connect and empower students and young professionals to thrive with diabetes." CDN currently has over 110 affiliated student-led Chapters on campuses across the US, with over 30 Chapters in the process of getting started.

In addition to CDN's Chapter Network, additional programs include empowering young adult leadership with the diabetes community, and programs for newly diagnosed young adults (those diagnosed with T1D between the ages of 17-25). Recent events hosted by CDN include a focus group of newly diagnosed young adults to assist in the development of specific resources for this population (research article pending), as well as a Student Leadership Retreat, which has recently completed its fourth consecutive year.

CDN also provides resources to assist with the transition to independence through audience-specific "Off to College" booklets, with both a student and a parent version. These booklets include topics such as looking at schools, packing, finding a new clinician, parent/child communication, expected campus challenges, talking to roommates, alcohol, and much more. Further, the "Off to College Event Host Guide" assists clinicians in hosting "transition events" for high school students with T1D.

Recently, the CDN Campus Advisory Committee developed the "Campus Toolkit Program" that includes a toolkits for Disability Services, Counseling Centers, and Health Centers. These toolkits are designed to help key departments on college campuses provide better support and resources to students with diabetes, with the goal of minimizing negative health and academic outcomes and improving student experiences in college. A pilot to 25 campuses will be conducted for the 2017-18 school year.

Evaluation of a Diabetes Registered Student Organization: Collaborative Practice

Design: This was a descriptive research design using an electronic survey. The purpose of the study was to examine the relationship between membership of diabetes student organization (CDN Chapters) and mental and physical health outcomes including HbA1c, and perception of isolation, and depression.

Methods: An electronic survey was developed based on challenges experienced by college students living with diabetes. A purposeful sample was recruited for the study using the CDN database and emails were sent to those identified as "student", which included members of local university chapters and non-members across the United States. The survey was completed between April 3rd-24th, 2017. Of the 532 who completed the survey, 375 met the inclusion criteria of young adults with T1D currently enrolled in an undergraduate or graduate college program. If interested participants could enter their email for a chance to be entered into a raffle for Amazon gift cards after completing the survey.

Analysis: All data was analyzed using IBM Statistical Package for the Social Sciences (SPSS) version 23, Chicago IL. Standard descriptive statistics were used to analyze the outcomes, demographic, and independent variables of interest. Chi Square and Pearson correlation was used to examine the relationship and difference between member and non-members of a diabetes student organization.

Results: CDN Chapter members (n = 246) and non-members (n = 129) completed an online survey. There was an inverse relationship of college students' level of isolation when entering college and joining the diabetes student organization (20% and 49%, respectively). Thirty-one percent of CDN chapter members reported a decrease in their HbA1c compared to 43% of non-members reporting a rise in HbA1c. Among those with an eating disorder, almost half of the CDN chapter members reported an improvement, while more than half of non-members reported that their eating disorder worsened. Similar results were found when asked about feelings of depression. Membership in CDN improved health and college experience with less isolation among the group of study participants.

Conclusion

College transition is difficult for some and is more complex with a chronic illness such as T1D. Student organizations can have a positive impact on college students health and improve their college experience. More than half of the participants strongly agreed that their college CDN Chapter helped them connect with other people who understand what they are going through. The study cannot be generalized to other organizations, however, it could be replicated with other organizations. More research is needed in this area of young adults transitioning with chronic illnesses. Results translate in many areas of academia including student health, disability support services, faculty education, and mental health services. Also, clinical practitioners must understand the resources available to college students as they transition their patients to college or adult health care. Practice changes in transition and policies in the academic setting require leaders to understand the effect on young adults with chronic conditions and make policy changes to improve college living for those with chronic conditions.

Title:

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

Keywords:

college transition, peer support and type one diabetes

References:

Centers for Disease Control and Prevention. (2014). National diabetes statistics report: Estimates of diabetes and its burden in the United States. Retrieved from <https://www.cdc.gov/diabetes/pubs/statsreport14/national-diabetes-report-web.pdf>

Dabelea, D., Mayer-Davis, E. J., Saydah, S., Imperatore, G., Linder, B., Divers, J., & Hamman, R. F. (2016). Prevalence of type 1 and type 2 diabetes among children and adolescents from 2001 to 2009. *JAMA*, 311(17), 1778-1786. doi: 10.1001/jama.2014.3201.

Health Resources Services Administration. (2016). Children with special health care needs. Retrieved from <https://mchb.hrsa.gov/maternal-child-health-topics/children-and-youth-special-health-needs>

Herts, K., Wallis, E., & Maslow, G. (2014). College freshman with chronic illness: A comparison with healthy first-year students. *Journal of College Student Development*, 55 (5), 475-480.

Imperatore, G., Boyle, J. P., Thompson, T. J., Case, D., Dabelea, D., Hamman, R. F.,.....& SEARCH for Diabetes in Youth Study Group. (2012). Projections of type 1 and type 2 diabetes burden in the U.S. population aged < 20 years through 2050: Dynamic modeling of incidence, mortality, and population growth. *Diabetes Care*; 35(12), 2515-2520. doi: 10.2337/dc12-0669

(Joensen, L. E., Filges, T. & Willaing, I. (2016). Patient perspectives on peer support for adults with type 1 diabetes: a need for diabetes-specific social capital. *Dovepress*, 10, 1443-1451. <http://dx.doi.org/10.2147/PPA.S111696>

Abstract Summary:

Like others with chronic conditions, young adults with diabetes transitioning to college may have impaired health and wellness outcomes. A study found that disease-specific student organizational support positively impacted diabetes health and wellness outcomes. Nursing plays a pivotal role in transitioning from a clinic, academic, and policy perspective.

Content Outline:

Introduction

- College Living with a Chronic Condition
- Collaborative Practice: School of Nursing and a Non-profit Organization

College Campus Living with Type 1 Diabetes

- Trends
 - Prevalence
 - Age of Diagnosis
- College Transition Challenges
 - Glucose management
 - Physical Aspects
 - Emotional and mental well-being Aspects

Diabetes Registered Student Organization

- College Diabetes Network (CDN)
 - History and Vision
 - Growth in University Chapters
 - Events and Retreats
- Guidance and Toolkits for College Campus Living with Diabetes
 - Off to College Program
 - College Campus Program

Evaluation of a Diabetes Registered Student Organization: Collaborative Practice

- Research Design
- Methods

- Analysis

- Results

Conclusion

- College life with a chronic illness: Type 1 Diabetes
- Translation into academia, clinical practice and leaders to change practice and policies

First Primary Presenting Author

Primary Presenting Author

Jennifer L. Saylor, PhD, APRN, ACNS-BC
University of Delaware
School of Nursing
Assistant Professor
McDowell Hall
Newark DE
USA

Professional Experience: 2012-present Assistant Professor, School of Nursing University of Delaware, Newark, DE 2008-2012 Clinical Nursing Instructor, School of Nursing, University of Delaware 2001-2008 Supplemental Contract Faculty: Clinical Nursing Instructor, School of Nursing University of Delaware, Newark, DE 2006-2010 Clinical Nurse, Heart and Vascular Interventional Services Christiana Care Health Services, Newark, DE 2004-2006 Evidence-based Practice Research Coordinator, Division of Research in Department of Nursing, Thomas Jefferson University Philadelphia, PA 2003-2004 Data Acquisition/Analyst Expert, Translational Nursing Research Department, Hospital of the University of Pennsylvania, Philadelphia, PA 2002-2003 Clinical Nurse Specialist, Cardiothoracic Surgical Unit, Hospital of the University of Pennsylvania 2001-2002 Cardiovascular Research Coordinator, Christiana Care Health Services 2000-2001 Cardiology Nurse: Nuclear Center, Coumadin Care Center and Arrhythmia Center, Delaware Cardiovascular Associates, Wilmington, DE 1998-2000 Clinical Nurse, Cardiovascular-Surgical Step-down unit and Critical Care Per Diem, Christiana Care Hospital Author/coauthor: 11 publications related to simulation and diabetes; 2 book chapters Numerous presentations at scientific meetings

Author Summary: Dr. Saylor is an Assistant Professor at the University of Delaware and earned her PhD at University of Maryland. Currently, she is the Beta Xi Chapter first faculty counselor, International Governance Committee Member, and Co-chair of the Sigma Charter Review Task Force. She is also a founding member of the Campus Advisory Council Committee for the College Diabetes Network. Dr. Saylor received the Delaware Today Top Nurses award for Academic Excellence in 2016 and 2017.

Second Secondary Presenting Author

Corresponding Secondary Presenting Author

Emily Ike, MA
College Diabetes Network
Program Director
Boston MA
USA

Professional Experience: Emily Ike is the Program Director at the College Diabetes Network. She completed her Master of Science in Community Health Education at Teachers College-Columbia University and now works to develop and implement community-centered, evidence based programming for young adults with type 1 diabetes.

Author Summary: Emily Ike is the Program Director at the College Diabetes Network. She completed

her Master of Science in Community Health Education at Teachers College-Columbia University and now works to develop and implement community-centered, evidence based programming for young adults with type 1 diabetes.