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UROP Proposal

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It is generally accepted that adolescence is a period of transitions, where adolescents move toward changes in the parent-child relationship and friends, with such changes creating challenges for children and adolescents with Type 1 Diabetes. Like other kinds of chronic illnesses, Type 1 Diabetes requires complicated and time consuming self-care regimens that would often distinguish those with the illness from their peers. As children enter adolescence, their peers grow more important to them. Fitting into social circles by gaining peer acceptance become more important so that adolescents with Type 1 Diabetes might ignore their self-care regimens in order to fit in with their peers (Drew, Berg, & Wiebe, 2010). Poorer metabolic control has been attributed to peer interactions, both directly, like avoiding to perform blood glucose tests in school, and indirectly, such as being affected physically by the stress generated from receiving negative reactions from peers for adhering to diabetes care regimen (Palladino & Helgeson, 2012).

Other factors may also be predictors of metabolic control and adherence in adolescents with Type 1 Diabetes, such as the adolescent's family structure and socioeconomic status (SES), as well as experienced stress levels. Existing literature shows that adolescents who report more critical parenting usually have higher HbA1c values, with lower adherence as a likely mediator (Duke et al., 2008). SES also plays a vital role in Type 1 Diabetes outcomes, as various SES measures have been shown to be associated with poorer adherence to regimen, poor metabolic control, multiple cardiovascular risk factors pertaining to Type 1 Diabetes, and other diabetes-related health complications (Secrest, Costacou, Gutelius, Miller, Songer, & Orchard, 2011, Drew et al, 2011).

It is well known that stress levels are associated with health outcomes, and Type 1 Diabetes is not an exception to this fact. Stressful life events have been found to be associated

with poorer metabolic control and self-care adherence in Type 1 Diabetes, with younger children being the exception, which could be attributed to their parents still monitoring their diabetes care (Helgeson, Escobar, Siminerio, & Becker, 2010)

These family, friend and stress factors may be jointly involved, so that each of those factors also affects each other and leads to certain specific outcomes (Conger & Donnellan, 2007, Drew et al., 2011, Gallo, Smith, & Cox, 2006). For instance, low SES may be associated with higher stress and poorer parenting skills, which leads adolescents to seek support from friends, which could lead to peer conformity and threaten good adherence. The present study aims to examine the relationships between the previously stated factors and self-care adherence behaviors as well metabolic control in adolescents with Type 1 Diabetes.

Summary of Methods

The proposed study utilizes a large longitudinal study of adolescents with diabetes and their families conducted by Dr. Cynthia Berg of the University of Utah and Dr. Deborah Wiebe of the University of Texas Southwestern Medical Center. The adolescent participants and their parents were recruited from a university/private partnership clinic and a community-based private practice and were asked to complete sets of questionnaires and surveys at six different time points. Adolescents also performed cognitive tests at the first time point. For this project, statistical analyses will be conducted to determine the correlation and interaction between SES of the participants' family, perceived stress level, and levels of peer conformity as well as peer support.

Research Involvement and Timeline

The data this project will be employing would be coming from an existing longitudinal data set. I plan to have the study question refined during September, and start to conduct data

analyses in October. And then, I would be start drafting the project in November and have the final draft ready for approval in early December.

Educational Objectives

One of the first psychology classes I took was Health Psychology, and it had a tremendous impact on how I view illnesses and disorders. Health psychologists strive to understand the effects of biological, psychological, environmental, and cultural factors on traditional physical illnesses. As soon as I joined Dr. Berg's lab this past fall, I have had numerous opportunities to apply what I have learned in my health psychology class, as well as a few other developmental psychology courses, into real life research settings. Adolescents with Type 1 Diabetes are the perfect population in which to study health psychology, as they are facing the transition into a different life course and changes in parent-child relationships especially affect their ability to manage their illness on a daily basis (Berg et al., 2011). With this project, I believe that I would be able to gain more insight into the complicated relationship between chronic illnesses and the numerous factors that surround those who have them, from a health psychologist's point of view.

Most of my past research experiences are within Dr. Berg's lab. I am a student in the Health Sciences LEAP program and I did my third year research project on the effects of peer support and peer conformity on the managing of Type 1 Diabetes in adolescents, using Dr. Berg's data set. The present project will be an expansion of my LEAP project and will be building on it in various ways. During the past year, I have been involved in recruiting participants at the Utah Diabetes Center and have helped to test adolescents and their families in the protocol. With the literature review that I have done pertaining to the material of this project

and the familiarity of the lab, it should be educational and challenging, but not difficult for me to complete this project under the supervision of my advisor.

Reference

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