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# Swinburne University of Technology & The Royal Children's Hospital (Melbourne)

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*The Royal Children's Hospital, Melbourne*



## **Type 1 Diabetes as a Risk Factor for Depression and other Adverse Outcomes in adolescents and young adults from rural Victoria.**

### **Final Report**

**May 30, 2009**

**Prepared by Dr Naomi Hackworth & Prof. Susan Moore**

#### **Researchers**

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*beyondblue: the national depression initiative*



# PROJECT FINAL REPORT

## PROJECT SUMMARY

- 1. Project title:** Type 1 diabetes as a risk factor for depression and other adverse outcomes in adolescents and young adults from rural Victoria.
- 2. Total funded amount:** \$90,137
- 3. Chief Investigator and names of all the investigators and organisations involved:**

Chief Investigator:

**Dr Naomi Hackworth**, Swinburne University of Technology

Associate Investigators:

**Professor Susan Moore**, Swinburne University of Technology

**Associate Professor Fergus Cameron**, Royal Children's Hospital

**Associate Professor Elisabeth Northam**, Royal Children's Hospital

- 4. Time- frame:**

<b>Final Report Date:</b>	30 May 2009
<b>Project Start Date:</b>	25 February 2008
<b>Project completion Date:</b>	29 May 2009
<b>Extensions (if any):</b>	N/A

## 5. A brief description of the project

The current study applied a mixed method design to explore the psychosocial concerns and psychological vulnerabilities of adolescents and young adults with Type 1 diabetes from rural areas of Victoria.

The study had three main aims:

- To document the disease-related psychosocial concerns of young people from rural areas with Type 1 diabetes.
- To assess the relationships between disease concerns, negative emotions (depression, anxiety), quality of life and the availability of social support, and whether these differed between rural and urban youths with Type 1 diabetes.
- To use the findings from the study to inform the development of a psycho-educational mental health website for rural youth with Type 1 diabetes.

Methodology included:

- An interview/focus group study of rural adolescents with Type 1 diabetes and parents of adolescents with diabetes.
- A questionnaire study of both rural and urban adolescents and young adults with Type

1 diabetes and their parents.

- The development and preliminary scoping of a psycho-educational mental health website for adolescents and young adults with Type 1 diabetes from rural areas

## **6. Key project findings and main outcomes**

*Based on the research aims the key findings were:*

- The main concerns expressed by adolescents and their parents included a sense of geographical isolation from specialist diabetes services, emergency care and diabetes relevant events available in the city; a sense of social isolation (or lack of understanding) from peers (particularly among older adolescent girls); the relentless nature of ongoing diabetes management; fears and ongoing worry about short and long term life-threatening health complications.
- Quantitative findings indicate that adolescents and young adults with Type 1 diabetes are at heightened risk of developing adverse mental health outcomes, regardless of whether they live in urban or regional areas, and that mental health outcomes are associated with disease relevant self care activities and in turn metabolic control. In addition this risk increases with age.
- Gender differences were apparent with males showing higher self efficacy, less worry about their condition, but also a higher level of risk taking behaviour.
- The main predictors of low self care in the cohort were low negative affect (depression, anxiety, stress & poor quality of life), high risk taking, and lower levels of community engagement, social support and self efficacy. Self care, along with urban dwelling were predictors of improved diabetes relevant metabolic control. Higher parental ratings of their child's physical and psychological well being were also associated with improved diabetes control.

Findings were used to inform the development of a psycho-educational mental health website for adolescents and young adults with Type 1 diabetes from rural areas ([www.themeter.com.au](http://www.themeter.com.au)).

- Preliminary scoping of the website with a small sample of rural youth has yielded positive feedback, however a more extensive evaluation is in process.

## **7. Implications for policy and practice – including any recommendations for stakeholders and plans for implementation in practice**

The findings from this study have clear implications for health practitioners working in the primary health care of young people with Type 1 diabetes.

- It is essential that primary health practitioners, who work with young people with Type

1 diabetes, have an awareness of and give attention to mental health factors as part of the routine management of the condition, especially during the adolescent and young adult years.

- There is urgent need for the development and implementation of a preventative intervention, targeted to impact on variables that have been shown to influence self care behaviours (e.g., depression, anxiety, self efficacy, risk taking, support). Such a targeted intervention has the potential to have high impact on both the physical and psychological outcomes for young people with Type1 diabetes.
  - To be successful interventions need to engage their audience. The enthusiasm on the young people in this study and in the population in general for the online interface, suggests that an online intervention may be an appropriate way to engage these adolescents, especially those disadvantaged by geographical or social isolation.
- 8. Intended, completed or in press publications arising from the project (please note that *beyondblue* must be advised of any intention to publish results before they are made publicly available under the Funding Agreement for the project).**
- The authors have two journal articles in the planning/preparation phase (one in relation to urban/rural differences following 10 years of outreach clinics, and one on relationships between key variables). It is planned to submit these papers for publication within the next three months.
  - An abstract will be submitted later this year for approval for presentation at the 27th International Congress of Applied Psychology in Melbourne in 2010.
  - The research will also be submitted for presentation at national and international diabetes relevant conferences over the next 12 months.
- 9. Next steps. For example: applications for further funding to other funding bodies to continue the research, plans for publication and dissemination and plans for informing and influencing practice, policy and partnerships**
- An application for further funding to build on the current research has been submitted in the *beyondblue* Centre of Excellence 2009 round. Funding has been requested to enhance and evaluate the efficacy of the Nothing Ventured – Nothing Gained online adolescent and parent mental health program for the prevention of anxiety, depression and other adverse mental health outcomes in rural adolescents with Type 1 diabetes.
  - Extensive dissemination of themeter.com.au website will occur over the next two months including a formal launch of the site at the Royal Children’s Hospital Diabetes Outreach clinics and through media campaigns.
  - Planned dissemination to rural primary health care professionals via rural community health networks.

- Findings to be presented to endocrinologists at the Royal Children's Hospital and disseminated through selected high profile conferences.

## **10.A comparison between the achieved outcomes of the project against the objectives**

Attached in Section 4.4 of the final report

## **11. Recommendations**

The researchers recommend that:

- The Meter website ([www.themeter.com.au](http://www.themeter.com.au)) is launched and disseminated widely – planned for June/July
- Funding is provided to develop and evaluate a preventative mental health intervention for adolescents with Type 1 diabetes.
- Resources are developed for primary health care professionals in rural areas (e.g. GPs, community nurses) to help them further understand, recognise and respond to the vulnerability of young people with diabetes to anxiety, depression and other mental health outcomes.
- The findings of this research are published widely to increase the knowledge and understanding of mental health problems as a major complication of Type 1 diabetes.