Health & Place 26 (2014) 180–187

Contents lists available at ScienceDirect

Health & Place

journal homepage: www.elsevier.com/locate/healthplace

Why do young adults with Type 1 diabetes find it difficult to manage diabetes in the workplace?

Myles Balfe [a,b,*,1], Ruairi Brugha [a,1], Diarmuid Smith [d,1], Seamus Sreenan [e,1], Frank Doyle [c,1], Ronan Conroy [a,1]

[a] Department of Public Health Medicine and Epidemiology, Royal College of Surgeons in Ireland, St. Stephen's Green, Dublin, Ireland
[b] Department of Sociology, University College Cork, Ireland
[c] Department of Psychology, Royal College of Surgeons in Ireland, St. Stephen's Green, Dublin, Ireland
[d] Endocrinology Department, Beaumont Hospital, Dublin, Ireland
[e] Endocrinology Department, Connolly Hospital, Dublin, Ireland

ARTICLE INFO

Article history:
Received 28 June 2013
Received in revised form
5 December 2013
Accepted 19 December 2013
Available online 31 December 2013

Keywords:
Young adult
Emerging adult
Work
Diabetes
Exercise

ABSTRACT

This article explores how and why workplace environments impact diabetes management for adults people with Type 1 diabetes, 23–30 years of age. Interviews were conducted with 35 young adults, 29 women and 6 men. The majority of these interviewees worked in sectors such as banking, technology and administration. Young adults found it difficult to manage diabetes in the workplace for two main reasons: work-related time pressures and the non-routine nature of interviewees' work and working environment. Young adults also found it difficult to get the time to exercise both inside and outside of work. Young adults with Type 1 diabetes need to be provided with the tools and technologies that they need to manage diabetes in modern flexible workplaces.

1. Background

Type 1 diabetes is a demanding condition to manage during young adulthood, even for adolescents who previously experienced excellent control of their diabetes (Garvey and Wolpert, 2011). Young people in this developmental period tend to have lifestyles that are more inconstant than their teenage or older adult counterparts (Lancaster et al., 2010). Many of them are transitioning from environments where they often had a great deal of stability in their lives, to new contexts that are characterised by less formal structure and support (Balfe, 2009). Young adults can feel invincible and engage in what are, from a diabetes management perspective, risky practices (Balfe 2007, Garvey and Wolpert, 2011; Weissberg-Benchell et al., 2007). Unsurprisingly, diabetes control often suffers during this time of life (Bryden et al., 2001) and young adults often experience relatively high levels of morbidity and mortality (Peters et al., 2011).

While the transitional period between the teens and the early twenties is undoubtedly a risky phase of life for young adults with diabetes, researchers have recently begun to argue that risk is not the full story of young adulthood for these young people (Garvey and Wolpert, 2011). Researchers highlight a second phase of young adult development, extending approximately from the early-twenties to about thirty years of age, which is characterized by stability rather than risk. Researchers refer to this period as 'later young adulthood' (Peters et al., 2011). Young adults in this age range have usually finished education and entered the workforce. They often face family responsibilities (Weissberg-Benchell et al., 2007). They tend to be more open to improving their self-care than their younger counterparts (Garvey and Wolpert, 2011) as well as more concerned about long-term diabetes complications (Peters et al., 2011). However while this second phase of young adulthood is typified by a general stabilization trajectory, researchers also theorize that a number of factors may undermine the general improvements in diabetes management outlined here (Garvey and Wolpert, 2011). Difficulties managing diabetes in particular environmental contexts, such as the workplace, have been identified as one such factor (Markowitz and Laffel, 2012).

Research, including health geography research, that has been conducted on young adults with diabetes has tended to focus on young adults making the transition to young adulthood (Garvey and Wolpert, 2011); and notably much of this research has focused

* Corresponding author at: Department of Public Health Medicine and Epidemiology, Royal College of Surgeons in Ireland, St. Stephen's Green, Dublin, Ireland. Tel.: +353 1 4028668.
E-mail addresses: mylesbalfe@rcsi.ie (M. Balfe), rbrugha@rcsi.ie (R. Brugha), dsmithrooms@beaumont.ie (D. Smith), ssreenan@rcsi.ie (S. Sreenan), FDoyle4@rcsi.ie (F. Doyle), rconroy@rcsi.ie (R. Conroy).
[1] These authors contributed equally to this work.

1353-8292/$ - see front matter © 2014 Elsevier Ltd. All rights reserved.
http://dx.doi.org/10.1016/j.healthplace.2013.12.016

on university students with diabetes, specifically on how young people make the transition from home and school to university (Balfe, 2007, 2009; Balfe and Jackson, 2007; Miller-Hagan and Janas, 2002; Ramchandani et al., 2000). There has been little empirical work conducted on young adults in the second phase of young adulthood. This article explores how and why workplace environments effect diabetes management for young people with Type 1 diabetes, 23–30 years of age. Although Markowitz and Laffel, 2012 have identified that young adults can experience difficulties managing their diabetes in work, there is a lack of understanding about why these difficulties occur. Appreciating and addressing workplace-related diabetes management difficulties is important not only in order to reduce short-term morbidity but also to lay the groundwork for longer-term patterns of good diabetes control. Later young adulthood is a formative stage of development for young people with diabetes, and young people who develop optimal diabetes control during this period are likely to maintain such control into the future.

2. Methods

2.1. Sample

Study participants ($n=32$) were primarily recruited from an Irish Facebook support group for young adults with Type 1 diabetes, and from the Facebook page of Diabetes Ireland, Ireland's leading diabetes charity. The recruitment message indicated that all young adult who took part in the study would receive a 30 euro gift token for their time. We concentrated our recruitment efforts on Facebook because we felt that the social media site would provide an efficient and cost-effective platform for reaching a young adult audience. Recruitment messages indicated that the project was looking to talk to young adults with Type 1 diabetes who were between 23 and 30 years of age. Recruitment stopped after interview thirty-two as we felt that we had reached data saturation, that is the point where no new themes were emerging from the interviews. To ensure that this was in fact the case we completed an additional three interviews with young adults who we recruited from a specialist young adult clinic in a Dublin hospital. The themes that arose in those three interviews were similar to those that arose in the Facebook interviews and therefore we did not seek to recruit more participants, i.e. we were confident that we had reached data saturation.

Twenty-nine women and six men with Type 1 diabetes were interviewed in all. See Table 1 for young adults' self-reported demographic characteristics. The overall sample size (35 young adults) is within best practice guidelines for studies based on semi-structured qualitative interviews (Morse, 2000).

2.2. Approach

Interviews were chosen as the research method because we wanted to explore participants' accounts and experiences in detail. All interviews were conducted by the first author. Seventeen of the interviews were conducted over the telephone and eighteen in person. Interviews with young adults lasted 34–86 min, with telephone interviews being shorter.

Before each interview began, interviewees were given information about the project and what taking part in it would practically involve (the approximate length of the interview and the Types of questions that the interview would cover). Participants were informed that the interviews would be taperecorded, and that the interviews would be typed up and reported in an anonymous format. Respondents who completed face-to-face interviews were asked to give written consent to take part in the study. Respondents who completed telephone interviews were asked to give verbal consent.

The young adult interview schedule was divided into two sections. The first section asked young adults to talk about day-to-day factors in their lives that they felt impacted their diabetes control. The second section of the young adult interview schedule asked young adults to talk about their perspectives on, and experiences of using, diabetes health services in Ireland. It is the findings generated by questions in the first section of the interview schedule (factors that influence day-to-day diabetes management) that are reported in this article.

2.3. Analysis

Interviews were thematically analyzed [21] in a word-processing package (MS Word). The first and the second authors double-coded the first four interviews and the other authors provided feedback on their analysis. The first author then analyzed the remainder of the interviews. Analysis for each interview began by 'open coding' the interview transcript, giving each section of the transcript that addressed a particular issue a descriptive tag or 'code'. These codes were then compared and contrasted within and across interview transcripts in order to determine if some of them could be subsumed under high level concepts or 'categories' (e.g. all posts labelled with the descriptive tags 'neglect of discretionary diabetes management activities in the workplace' and 'difficulties leaving work to go to clinical appointments' were placed under the higher level category 'impact of workplace times pressures on diabetes management'). The principle categories or

Table 1
Demographic characteristics of young adults who took part in the study. This data is self-reported.

	N (35)
Age (mean, SD)	26.9 (2.67)
Female	82.9%
No. of years has diabetes (mean, SD)	11.5 (5.6)
A1C (mean, SD)	7.94 (0.76)
Number of blood tests per day (mean, SD)	4.47 (1.98)
On insulin pump (CSII)	25.7%
Educated to degree level	93.9%
Private health insurance	64.3%
Working in knowledge/professional sector	17
Working as administrator or secretary	6
Working part-time casual work (e.g. in restaurant/coffee shop)	3
Number of interviewees working more than one job	3
Had previously worked in knowledge/professional sector but now in University	4
Unemployed	5