

## **Committing to a Health Promotion Program: An Australian Case Study**

**Rebekkah Middleton**, *University of Wollongong*  
**Lorna Moxham**, *University of Wollongong*  
**Dominique Parrish**, *University of Wollongong*

### **Abstract**

An Australian exercise and health promotion program for older people with diabetes was examined to explore what factors are required for participants to commit to such a program. A two-phased qualitative hermeneutic phenomenology research design was used incorporating 15 semistructured interviews with adults aged over 55 with diabetes, followed by a focus group to member check emerging themes. Commitment was recognized as a necessary factor for participants to continue to be part of an exercise and health promotion program. Two factors were perceived to be most critical in committing to such a program: first, having an obligation to undertake the program—"*signing up and being part of*"—and second, "*continuing in and being actively engaged*" in the program. This second factor was seen to be influenced by person-centeredness and individualization, experiencing personal benefits and connectedness with others. The findings from this research could inform exercise and health promotion program strategies that then lead to increased engagement and stronger commitment of older people with diabetes to such programs.

### **Keywords**

*diabetes; health promotion; leisure; older people; commitment*

---

**Rebekkah Middleton** is a senior lecturer and Academic Program Director in the School of Nursing at University of Wollongong. **Lorna Moxham** is a professor in mental health in the School of Nursing at University of Wollongong. **Dominique Parrish** is an associate professor and associate Dean of Education in the Faculty of Science, Medicine, and Health at University of Wollongong. Please send author correspondence to [rmiddle@uow.edu.au](mailto:rmiddle@uow.edu.au).

This paper examines what factors are required for older people with diabetes to commit to a program involving exercise and health promotion. In addition, it explores what an awareness of these factors implies. Findings were drawn from a research study whose aim was to understand the essence of meaning that older people with diabetes attribute to being involved in an exercise and health promotion program. The program was conducted in the state of NSW, Australia. The focus of this paper is on the specific factors related to commitment.

## **Background and Review of Literature**

Diabetes is a widespread and chronic disease both in Australia and internationally, affecting 347 million people worldwide. The World Health Organization (WHO, 2015b) estimates diabetes will be the seventh leading cause of death by 2030, with a rise of more than 50% in total deaths from diabetes predicted over the next 10 years. In Australia, diabetes affects 5.2% of the population generally, with this increasing to 12.3% in those aged over 55 years (Australian Institute of Health and Welfare [AIHW], 2016). Despite the documented health benefits and strong evidence that undertaking exercise can improve diabetes outcomes (Hu, Wallace, McCoy, & Amirehsani, 2014), with estimates as high as 80% of diabetes being potentially preventable through improved modifiable risk factors such as unhealthy diet and sedentary habits (Annucci, Rivellese, Bozzetto, & Riccardi, 2014; Carson, Williams, & Hill, 2014), most people with type 2 diabetes do not commit to engaging in regular physical activity (Boudreau & Godin, 2014; Brouwer, Van Der Graaf, Soedamah-Muthu, Wassink, & Visseren, 2010).

Physical activity/exercise and health promotion are critical aspects of health and are particularly important for people of any age with diabetes. Physical inactivity is the fourth leading risk factor of global mortality, is a burden of risk to quality of life, causes an estimated 3.2 million (annual) deaths globally, and has a large financial cost implication associated with it (Li, 2014; Wasenius et al., 2014; WHO, 2015a). Regardless of these risks, sedentary behaviors and lifestyles are progressively more prevalent in contemporary society (Lakerveld, Bot, Van Der Ploeg, & Nijpels, 2013; Sluik et al., 2012; Wimalawansa, 2013).

The clinical relevance of exercise intervention(s) in treating people with diabetes is well established (Jennings, Vandelanotte, Caperchione, & Mummery, 2014; Montesi, Moscatiello, Malavolti, Marzocchi, & Marchesini, 2013; Wisse et al., 2010). There is a substantial body of literature to support the premise that physical activity improves diabetes outcomes by assisting glucose control and weight management and preventing related complications (Boudreau & Godin, 2014; Brown, Riddell, Macpherson, Canning, & Kuk, 2014; Carson et al., 2014; Desveaux, Beauchamp, Goldstein, & Brooks, 2014; Ferrer, Cruz, Burge, Bayles, & Castilla, 2014; Hu et al., 2014; Huang, Cheng, Tsai, Lee, & Lu, 2014; Montesi

et al., 2013; Schneider et al., 2014), as well as improving an individual's overall health and wellness (Law, How, Ng, & Ng, 2013).

For older people, exercise is an important factor in improving mobility and functional capability, increasing muscle strength and endurance, and optimizing aerobic capacity (Angevaren, Aufdemkampe, Verhaar, Aleman, & Vanhees, 2008). Exercise also assists in reducing pain, building bone mineral density, and improving or maintaining quality of life (Howe, Rochester, Neil, Skelton, & Ballinger, 2012; Stanton, Reaburn, & Happell, 2013). For older people with diabetes, this is even more pertinent because their muscle mass, quality, and strength is significantly reduced (Park et al., 2007; Rahi et al., 2014). The value of exercise, particularly as people age, is clear. However, many older people with diabetes lack commitment to adhere to exercise programs and do not participate in physical activity to a recommended level (Balducci et al., 2014; Jennings et al., 2014; Zanetti et al., 2014). The need for older people with diabetes to be engaged in and committed to exercise, particularly exercise programs that are therapeutic in nature, to manage their diabetes effectively and assist in maintaining muscle mass and strength is essential (Annuzzi et al., 2014; Balducci et al., 2014; Centis et al., 2014).

The challenge of how older people with diabetes can be engaged in and commit to therapeutic exercise and health promotion programs and interventions is clearly outlined in literature (Jennings et al., 2014). The majority of research about older people with diabetes is physiological in nature and does not address the personal implications and reasons for choosing to be involved in exercise. This research sought to address these gaps by seeking to understand how exercise and physical activity in people with diabetes can be promoted and achieved and how these people can commit to maintaining it. Such an understanding can lead to better engagement with this population and their sustained involvement in exercise and health promotion programs.

## **Diabetes Management, Self-Management, and Maintaining a Healthy Lifestyle**

Generally, people with diabetes accept that healthy diet and physical activity are beneficial for maintaining a healthy lifestyle (Centis et al., 2014). If this is so, the question arises as to why the incidence of sedentary behavior is so high for many people with diabetes (Boudreau & Godin, 2014; Centis et al., 2014; Sluik et al., 2012; Wisse et al., 2010). Centis et al. (2014) asserted that people with diabetes find it difficult to commence exercise. In fact, the researchers identified that propensity for changing diet was significantly higher than engagement in regular physical activity, concluding that people with diabetes had low perceptions of the need to increase physical activity to control and manage their diabetes better (Centis et al., 2014). Others have reported similar findings (Centis et al., 2013; Vähäsarja et al., 2012).

An important aspect of diabetes management and maintaining a healthy lifestyle is diabetes self-management. This continuing process of facilitating knowledge, skill, and ability for self-care of diabetes is widely discussed in the literature, guided by evidence-based standards (Funnell et al., 2010; Haas et al., 2014). The theory of diabetes self-management espouses it is necessary for people with diabetes to improve their outcomes by making independent decisions about their disease and associated lifestyle behaviors and how they choose to engage with health care services (Funnell et al., 2010).

The American Diabetes Association (ADA) requires that all people with diabetes receive self-management education at diagnosis and, as needed, later (Haas et al., 2014). The ADA has developed five principles to inform diabetes self-management education: Diabetes education improves clinical outcomes, theoretically based empowerment strategies should be employed, behavioral and psychological strategies improve outcomes in conjunction with age-appropriate group education, ongoing support is essential, and goal setting supports self-management (Haas et al., 2014; Powers et al., 2015). For these principles to be practiced effectively, there are requirements for program structure (both internal and external), access, program coordination, staffing, curriculum, individualization, ongoing support, participant progression, and quality improvement (Powers et al., 2015). The ADA espouses that when these are implemented, the end point will be a more informed and engaged person with diabetes (Powers et al., 2015).

To achieve this desired outcome—an engaged and informed person with diabetes—various models have been implemented with this population, particularly in North America. An example is the Chronic Care Model, a systematic approach to rethinking and arranging medical care to form collaborations between health systems and communities developed to enable people with diabetes self-management skills (Baptista et al., 2016). Stellefson, Dipnarine, and Stopka (2013) undertook a literature review and found the Chronic Care Model to be effective in managing diabetes in the United States. The studies were all focused on people with diabetes between the ages of 50 and 70. Important conclusions outlined that diabetes self-management in chronic care improves physical, psychological, and behavioral outcomes when supported by health care professionals in the community (Stellefson et al., 2013). Stellefson et al. also proposed from their findings in the literature that “more personalized, patient-centered interactions” are helpful (p. 6).

Baptista et al. (2016) also explored the Chronic Care Model using a systematic review. Their findings indicated that clinical outcomes improved with the Chronic Care Model, but were limited when focus was on individual components. They concluded that combining all six components led to greater clinical benefits. This illustrates that models are useful in promoting self-management of diabetes, but also demonstrates a gap in the literature around personal mean-

ing of being involved in programs and how that can influence engagement and personal responsibility for managing the disease.

In practice, diabetes self-management is focused on individual capacity to make behavioral changes (Henderson, Wilson, Roberts, Munt, & Crotty, 2014). To conceptualize the process of intentional behavior change, what is arguably the dominant model of health behavior change must be considered. The transtheoretical model of change (Prochaska & DiClemente, 1983) assesses an individual's readiness to act on a new behavior and provides strategies to guide the individual through the process until he or she has actioned and is able to maintain the change. This established model for change has been used in a number of settings, including adherence to medications, weight management, and smoking cessation. However, it has not been reported in relation to exercise.

Brug et al. (2005) suggested the transtheoretical model is not applicable to physical activity, because of the complexity associated with physical activity. A myriad of aspects surround physical activity, such as transport, work, home life, leisure, and sport. Perceptions of physical activity and its place in a person's life are associated with behaviors and lifestyle. Physical activity cannot be given a "gold standard" (Brug et al., 2005, p. 246), because it will vary for each individual and this individual's capacity and desire. Brug et al. argued that effective and long-term physical activity promotion and sustainability needs to be more than providing health education and incorporating change strategies.

Fritz (2015) stated that people need to change lifestyle behaviors and integrate new tasks into their daily activities, which can be challenging because of life patterns and barriers. When diabetes self-management education is implemented, it produces clinical outcomes, but these positive results seem to diminish after approximately six months (Fritz, 2015). Fritz suggested that people with diabetes only accept aspects of diabetes education and training that fit with their circumstances, and they choose to integrate these into their daily life.

With this in mind, because people will choose to engage in a way that suits them and is congruent with their lifestyle, it is important to have a clear understanding of how individuals choose to engage in and then sustain engagement in health-promoting behaviors in a constantly shifting milieu of personal, physical, and environmental circumstances. It is vital to consider the ongoing shift that occurs in individuals in relation to their disease and their perception of illness and wellness.

Paterson (2001) discussed this movement, or shift, in her *Shifting Perspectives Model of Chronic Illness*. This is an important consideration of any diabetes management and self-management strategy implementation. As diabetes is a chronic illness, the model is most apposite to consider.

Paterson (2001) proposed that living with chronic illness is a continual process of shifting between perspectives of illness and wellness, depending on context. People may see illness as foremost and have a perspective centered on

“sickness, suffering, loss, and burden associated with living with a chronic illness” (Paterson, 2001, p. 23). Or they may have a perspective of wellness and see their disease “as an opportunity for meaningful change in relationships with the environment and others” (Paterson, 2001, p. 23) and consider self-identity more than the diseased body. This creates appreciation rather than feeling like a victim of the illness. The shift between the two states is dependent, Paterson (2001) said, on whether people feel a sense of control over their disease.

The perspective of chronic illness is not right or wrong, but only reflective of people’s needs and situations. Therefore, those involved with people with chronic illness need to listen and not assume, to individualize approaches.

Much literature around self-management of diabetes has shown that social support and connection facilitates better self-management (Henderson et al., 2014; Ku & Kegels, 2015; Luo et al., 2015; Tang, Funnell, Sinco, Spencer, & Heisler, 2015). When social connection was limited or absent, self-management of diabetes was not prioritized or did not occur, even when supported by health professionals (Henderson et al., 2014; Shah, Hwee, Cauch-Dudek, Ng, & Victor, 2015; Tang et al., 2015; Wu & Chang, 2014).

Another factor that has been found to inhibit self-management of diabetes is a lower level of income. A lack of social capital can restrict access to health information and to programs that can supplement self-management strategies (MacKee, 2014; Henderson et al., 2014). This is often associated with being an older person with diabetes. This additional factor of increasing age was identified in the literature as affecting self-management of the disease, with older people being less likely to self-manage and thereby engage in physical activity and healthy eating (O’Neil et al., 2014; Shah et al., 2015). Literature about self-management of diabetes generally suggests that social connections and higher levels of income appear to improve diabetes self-management practice. Knowledge of concepts alone is insufficient to deliver a successful health program (Wu & Chang, 2014). In addition, Majeed-Ariss, Jackson, Knapp, and Cheater (2015) suggested that recognition of the views and needs of people with diabetes is vital for designing and delivering patient-centered care.

It is therefore imperative that we consider that diabetes affects people’s lives and how they feel about the disease. Education is available for people with diabetes, but it can be a postcode lottery as to what kind of education people are actually getting about living with diabetes—particularly in Australia, where there is no national, evidence-based structural program (MacKee, 2014). Behavior change has long been recognized as critical in preventing and managing diabetes, but more focus is needed on translational research (MacKee, 2014).

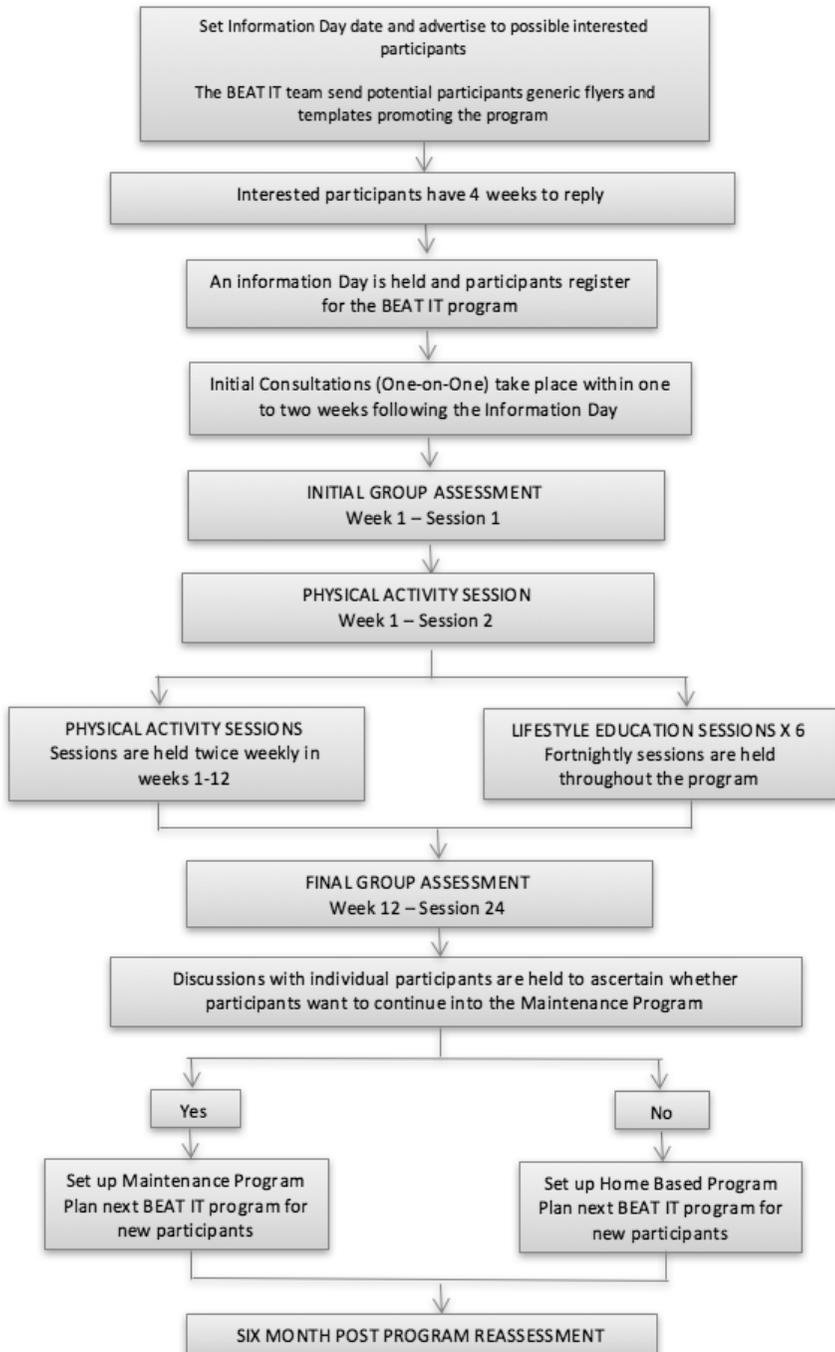
## **Diabetes and Engagement in Exercise Programs and Interventions**

Physical exercise is clearly necessary for people with diabetes to manage their disease effectively and necessary for maintaining muscle mass and strength and for potentially enhancing psychological health. This is especially important because some scholars have reported that older adults' level of exercise is poor and that any level of physical activity decreases with age (Buchman et al., 2014; Chen, Chang, & Lan, 2014; Rydeskog, Frändin, & Hansson Scherman, 2005). Given that exercise is crucial to physical well-being in older people, understanding how to engage this population in ways that are meaningful is essential to ensure active, meaningful, and sustainable participation.

Lack of commitment by people with diabetes in adhering to exercise programs is an issue internationally, not just in Australia (Balducci et al., 2014; Barrett, Plotnikoff, Courneya, & Raine, 2007; Zanetti et al., 2014). However, with supervision from exercise professionals, higher commitment has been attained (Balducci et al., 2014).

### **Beat It: An Exercise and Health Promotion Program for People With Diabetes**

This study was conducted with participants enrolled in an exercise and health promotion program called Beat It. Beat It was established by the Australian Diabetes Council and delivered across Australia by accredited providers. The program (detailed in Figure 1) is an evidence-based exercise and lifestyle education/modification program involving twice weekly individualized physical activity training and fortnightly lifestyle education (disease prevention, treatment, management), nutrition, and goal-setting sessions (Australian Diabetes Council, 2011). The 12-week program was offered to men and women over the age of 18 who were diagnosed with any form of diabetes and who were not working in paid employment. These parameters lent themselves to older people enrolling in the program. All the participants were over the age of 55 and retired.



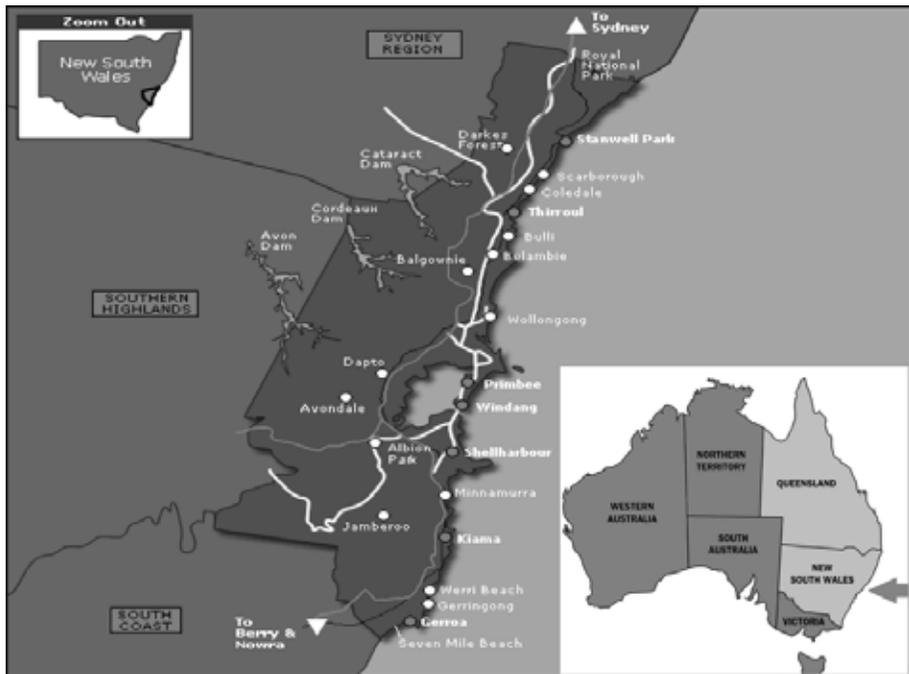
**Figure 1.** Beat It program implementation flow chart. Adapted from *Beat It: Physical activity and lifestyle program training course manual* (p. 16) by Australian Diabetes Council, 2011, Sydney, Australia: Author.

## Participants

Participants were identified from the most recent Beat It program. They were contacted by e-mail and/or mail with an introductory letter, information sheet, and consent form. They were asked to contact the researcher if they wanted to be involved. Fifteen participants expressed interest in being involved and interviewed as part of the research study. Two males and 13 females were interviewed with an age range of 56 to 73 and an average age of 64.

## Location

Participants in this study were from the Illawarra region, a coastal community approximately 90 km south of Sydney, NSW, Australia (see Figure 2). According to the National Diabetes Service Scheme, part of Diabetes Australia, 15.6% of the population in the Illawarra region is registered with the Scheme as having diabetes. These rates are higher than the national estimate of 12.3% (Diabetes Australia, 2016).



*Figure 2.* Location map of Illawarra

## Research Design

### Methodology

The research design used was a qualitative hermeneutic phenomenological methodology. As a means of inquiry, phenomenology is relevant to gaining an understanding of the essence of meaning that people with diabetes attribute to being involved in an exercise and health promotion program. A phenomenological approach facilitates the question of how we as humans experience the world and conceptualize a gamut of phenomena (Crotty, 1996; van Manen, 1990). It is an approach that facilitates an examination about *experience* as understood from the individual's perspective (Grbich, 2013). Phenomenology is subjective, with fundamental characteristics based on the observation that every phenomenon is experienced in individual ways and thus should be understood from the perspective of the individual experiencing it (Berger, 2010; Crotty, 1996; Rydeskog et al., 2005).

Phenomenology as a research methodology seeks to understand and describe the individual's lived experience of a phenomenon (Berger, 2010; Polit & Beck, 2014). This makes it a powerful tool to gain insight into what motivates actions of individuals and how meaning is constructed by the individual within the context and frame of reference of his or her situation (Berger, 2010; Mackey, 2005; Paley, 2013). Participants in phenomenological research must experience the phenomena. For this research, that meant participants had to be part of the exercise and health promotion program (Crotty, 1996). Thus, a purposive sample was necessary.

### Method

The design consisted of two phases. First, 15 semistructured interviews were conducted over 2 months with participants who had recently engaged in the exercise and health promotion program Beat It. Two leisure center sites in the Illawarra region had offered the program; participants were from both sites. The participants were aged 56 to 73 years of age (average age 64); two were male and 13 were female. The gender split is not suggestive of any particular reason, other than that more women responded to my invitation to be involved in the research.

The interview questions (see Table 1) guided participants to speak about their lived experience and disclose the meaning they attributed to engaging in Beat It. The sample size of 15 was considered appropriate because smaller numbers of participants can be used in phenomenological research (Giorgi, 1997; Mason, 2010). The purpose of this approach is to elicit richness of data around a specific lived experience that may be transferable, rather than to produce generalizable findings, which are based on a large sample size.

**Table 1**  
*Interview Questions and Prompts*

<b>Questions</b>
What did it mean for you to be involved in the Beat It program?
Tell me about the reason(s) you decided to be involved in Beat It
What was the purpose of the program overall for you?
What did it mean for you to be involved in a program involving exercise and health promotion?
What do you value from being a part of this program? Why?
Is there anything you would change about the program to make it more meaningful for you?
What is the major thing you got from participating in the program?
<b>Additional prompts</b>
Can you tell me more about that?
How did that make you feel?
What was your experience of that?
I'm interested to hear more about....

Interviews were conducted face-to-face and recorded. Transcripts were prepared by personally transcribing all taped conversations following the interviews, and critical conversations with two senior researchers happened continuously to discuss emerging themes. This enabled the researcher to understand the information gathered and conceptualize a process for analyzing the data. There was a definite sense that nothing new was emerging at the 14th and 15th interviews, so the researcher was satisfied she did not need to interview further.

The second phase consisted of a focus group, conducted after initial analysis of the interview transcripts, to discuss and member check the emerging themes (see Table 2). Invitation was sent by post to participants who had been involved in the interview. An introductory letter, participant information sheet, and consent form were sent. Those able to attend notified the researcher by e-mail or phone. Seven participants agreed to be part of the focus group. Focus groups provide opportunity for collaborative discussions to member check interpretation of previously collected data (Streubert & Carpenter, 2011) and to take back information to participants for confirmation (Charmaz, 2014).

**Table 2***Focus Group Questions and Prompts*

<b>Questions/Phrases</b>
A theme emerged around the importance of social connectedness with others in the Beat It program. Tell me about your social experience of being a part of Beat It
The instructor was identified as an important part of the program to contributing to meaning for participants in interviews. Can you tell me how the instructor influenced your experience of the Beat It program
Commitment arose as a theme from the interviews. Do you agree that commitment to be involved in the Beat It program was meaningful to you?
<b>Additional prompts</b>
Can you tell me more about that?
How? Why do you think that occurred?
What was your experience of that?
I'm interested to hear more about...
Do others agree with what Joe Bloggs has said? (Why? Why not?)

**Ethics**

Data were collected only after formal written ethics approval was acquired from the University of Wollongong Human Research Ethics Committee (HE14/057). A plain language information sheet outlining the nature and purpose of the research was provided to potential participants. Participants willing to be involved in the study were asked to contact the researcher.

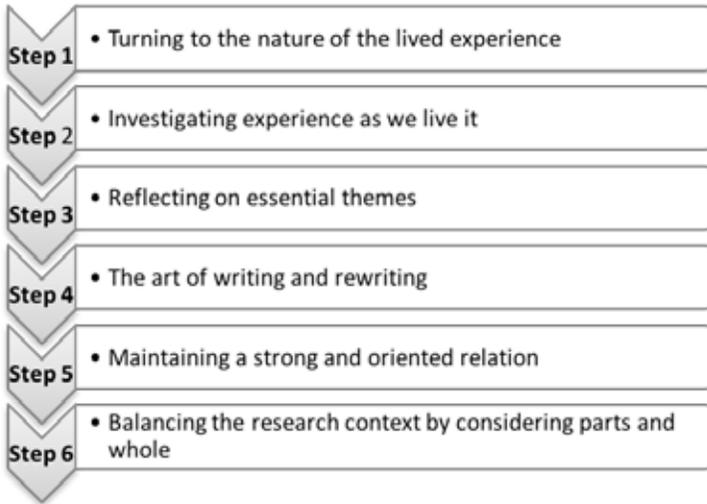
**Data Analysis**

Data analysis commenced following completion and transcription of all 15 interviews. Data analysis conformed to van Manen's (1990) six-step methodical structure. This process uses a Heideggerian hermeneutical research methodology and, as such, is faithful to the research design. Van Manen's steps have been used to analyze data from large and small studies of people's lived experience (Armour, Rivaux, & Bell, 2009; Berger, 2010; Cashin, Small, & Solberg, 2008; Chesla, 1995; Miles, Chapman, Francis, & Taylor, 2013) and will be discussed below.

**Van Manen's Six-Step Methodical Structure**

The approach to data analysis in this research was adapted from the work of van Manen (1990). Van Manen outlines six methodical steps that, although he acknowledges are sequential, have a dynamic movement and interplay between them throughout the research process. An unfolding and infolding occurs as the data is read and reread, considered and reconsidered, examined and

reexamined. There is no beginning or end, no top or bottom to this circular process. Van Manen's (1990) human science approach was used to guide the data analysis. The six steps are outlined in Figure 3.



*Figure 3.* Van Manen's six-step methodical structure.

Step 1, turning to the nature of lived experience, involves formulating a research question and divulging presumptions and understandings based on choosing a phenomenon of interest. Step 2, investigating experience as we live it, involves investigating through the person, not learning through literature, discussions, or other secondhand accounts. Hence in-depth interviews were chosen as an appropriate way of examining the participants' unique experiences.

Step 3, reflecting on essential themes, emphasizes the value of reflectively observing and analyzing phenomenon that can tend to be obscure. This step challenged the researcher to reflect on the themes identified from the interviews and then to highlight the essential meaning of the lived experience in question. Phenomenological research allows the obscure to be brought into focus. This stage of the analysis reflectively questions what actually makes up the nature of the lived experience being studied. This enables consciousness to be revealed and themes to be uncovered.

The art of writing and rewriting is Step 4. This step describes the phenomenon in the process by making visible the feelings, thoughts, and attitudes of participants. By undertaking this step, confluence of language and thoughts occur, being difficult to separate. This process assists in elucidating the phenomenon itself.

Step 5, maintaining a strong and orientated relation, is crucial for the researcher to maintain integrity to and focus on the research question. The final step in the process, Step 6, balancing the research context by considering parts and whole, involves the researcher monitoring the big picture and ensuring that the elements of the research contribute significantly to the whole.

## Coding

Coding was used to group and label and then to identify themes through labeling. Coding of the following occurred: themes, theoretical concepts, key words, participant values, interpretations, relationships and states of mind, events and key situations reported by participants, my own views, and metaphors and similar language. NVivo was used to create nodes and assist in developing themes and categories.

## Credibility

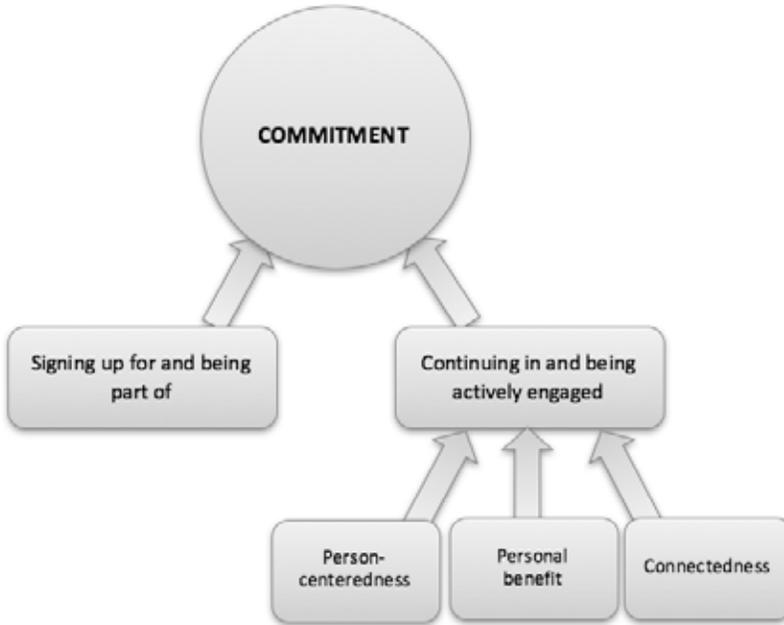
A validated model was used for data analysis to limit bias and enhance rigor in the research study. Incorporating other researchers (PhD supervisors) into the interpretation of the data served to challenge, question, and confirm the lead researcher's interpretations of the data, minimize bias, and enhance credibility. The credibility of the study was augmented by reading the participants' narratives and examining personal interpretations. The supervisors enriched and substantiated my data interpretations, which also strengthened the credibility of the study.

In addition, the process of writing and rewriting along with ongoing critical dialogue with supervisors strengthened critical reflection. This also contributed to the credibility of the study and served to heighten awareness of any held preconceptions and assumptions. In doing this, the Heideggerian phenomenological approach was maintained.

## Findings

Participants described commitment and explained that it was a necessary factor for them to continue to be part of the exercise and health promotion program. They spoke of commitment with terms including *obliged*, *compelled*, *required*, and *owed*. These words describe an intrinsic meaning of commitment posited as "coming from within." Participants did not feel "obliged" to continue as a result of external coercion, but rather they felt "obliged" to themselves, or they "owed it to themselves."

Two categories informed the theme of commitment: *signing up and being part of* and *continuing in and being actively engaged* in the exercise and health promotion program. Figure 4 diagrammatically represents the theme of commitment and the categories and elements that informed it.



*Figure 4.* Commitment theme and associated categories and elements.

### **Signing Up for and Being Part of**

In interview, participants discussed commitment to the program in terms of how they had signed up for and were now a part of the program. This was a decision they felt they had to honor and were obliged to accommodate. This was evident in comments such as the following: “Well, it meant that I’d committed to something and I needed to keep that commitment. I certainly didn’t miss a week if I was at all able to do it” (Participant 5 [P5]). Another participant said,

It was just that I’m gunna [*sic*] do this because I said I would. And even though sometimes I didn’t feel like coming, I did. I think because I agreed to come, I was going to come. There was motivation to come because I agreed to something. When I agree to something, I generally do it. (P6)

The focus group explored the theme of commitment in greater depth. All focus group participants agreed signing up for the program meant committing to come each week. They described their inherent commitment to signing up as a motivating factor driving engagement with the program. Being a part of the program was “non-negotiable,” because a commitment had been made. Focus group participants suggested commitment to be a “generational thing”. This older population claimed that to finish what they started was a “part of our

generation.” This was illustrated in comments such as “Here’s the program, I’ve agreed to do it, so I’m going to do it” (P4), “We’ve said we will, so we will” (P7), and “Yes, you’ve made a verbal contract and you’re going to stick with this” (P1).

The findings indicated that participants wanted to “honor their commitment to the program.” This commitment was made when they agreed to sign up and be part of the program. It appeared to be influenced by their age, as they believed an agreement was made and must therefore be kept.

### **Continuing in and Being Actively Engaged**

*Continuing in and being actively engaged* had several elements informing this aspect of commitment to the program. Repeatedly in interviews, participants spoke of how their commitment to continuing in the program and being actively involved in it was attributed to the degree to which the program was person centered. Participants frequently talked in interview about how they felt the program was “about me,” how they felt the instructors would do things particularly “for me,” how they felt the exercise and health promotion was delivered in a way that was “fun for me” and “good and appropriate for me.”

The program facilitated an environment that engaged participants and contributed to commitment. Participants noted in interview that they felt instructors tailored the program to them, to their needs and abilities. The personal benefit and individual tailoring was confirmed in the focus group when participants said they felt they were at the center of all interventions and decisions. Participants mentioned that without these facets of person-centeredness, they would not have had the same compulsion to commit to the program, as noted in comments such as the following: “You need [instructor] there or someone of that ilk. I’d have stopped coming if the instructors weren’t caring and personal” (P3). Participant P8 said,

I would like to say again how good the instructors were and how effectively they tailored people’s difficulties and disabilities and so on. The other participants likewise were encouraging and helpful to each other. I felt like an individual. You did feel like you got individual attention and understanding.

Participants individually discussed that their commitment was enhanced when personal benefit was apparent. Participants described how experiencing physical and/or psychological benefits through participating in the exercise and health promotion program was encouraging and drove their desire to continue:

You felt good about it. You could see change. It made me feel good about myself because I had put on muscle and lost weight. I suffer from high blood pressure. Not badly but I reduced my medication to half

and it's still the same. So that's pretty good. The feeling that I got. You felt good about it. You could see change. For me, it was just finding out that my body could just be young again, in such a short time. (P12)

The feeling of feeling good about yourself and you weren't feeling good about yourself this morning. I felt relaxed and sometimes you — if you have few worries, you can forget about them for the hour that you're doing the thing and then afterwards, they don't seem so bad. . . . The general feeling of just feeling a bit more bouncy and being able to get through the day more easily. (P13)

Discussion in the focus group confirmed that a sense of personal benefit contributed to continuing in and being actively involved in the program. Personal benefit physically and psychologically was credited as a key factor in maintaining commitment to the program.

Personal benefit was also evident to this group of older people in terms of access and the cost of the program. Because all participants were retired and on a pension (self-funded or government), ease of access and cost were highlighted as influences that affected their commitment to the program, to continuing in it and being actively involved in it. The Beat It program was free for participants meeting the inclusion criteria outlined previously. Participants said, "I've always wanted to go to the gym but could never afford it, being free meant I could go, and I loved every minute of it, loved it" (P13), "They were easy places to go to, easy parking and everything was easy which made it easy to get to" (P15), and "I caught the free bus every week, so it was easy" (P3).

The factors of access and cost were discoursed at length in the focus group as essential in assisting the participants to maintain their commitment to the program, as it enabled involvement in the program that otherwise would not have been able to be afforded. The ease of access including parking availability, leisure center location, and access to the free bus service further enhanced commitment by ensuring no barriers prevented participants from attending.

A sense of community and camaraderie that the participants discussed individually and also in the focus group strengthened the commitment individuals had to actively participating and continuing to attend the program each week. Participants wanted to attend weekly to meet fellow participants, with whom they shared an understanding and had much in common, such as age, life experience, and diabetes. This forged a commitment and desire to continue to support each other and provide encouragement, which motivated them to continue to attend. Participants spoke in interview of these connections as enhancing their desire to commit and be involved each week:

I really liked the people there so that was an encouragement to keep coming back. The group kind of bonded after a few weeks and people

talked to each other and told each other their stories and setbacks and steps forward and achievements and accomplishments and, oh crap, I had a cream cake yesterday and that kind of thing. So it was a bonding sort of exercise. (P6)

Something that's really good with the program is the bulk of the people who did it are people who are similar age. Everyone was doing it at their own pace and if you stopped it wasn't like people were looking at you and singling you out because you're not participating, it just, to me, felt more comfortable . . . because it was like-minded people. (P10)

Commitment was described as easier to keep when treated like an individual and when social connections developed. The sense of community and camaraderie was extensively discussed in the focus group as motivating participants to continue to attend willingly.

## Discussion

Participants explained that factors contributing to their ongoing commitment to a health and exercise program were related to *signing up and being part of* and *continuing in and being actively engaged*. They explained that a person-centered approach not only was important, but also prompted their ongoing commitment and active engagement in the program

### Signing Up and Being a Part of the Program

Participants spoke of needing to “honor” the decision to attend and how they were motivated to attend because they had “agreed to something.” Participants regularly referred to the “commitment” they had made and how they did not miss classes unless they “had a bloody good reason.” They explained this as “the way [we] do things.” Even when they did not feel like attending, they would still do so because “the commitment was there,” even if that meant “forcing” themselves to attend. Participants seemed to assert that it was their generational value of honoring their word that influenced their decision to commit and *sign up and be part of* the program. They claimed it was an inherent part of being an older generation that they kept their word.

In the focus group, participants described this as being related to “their generation,” when “verbal contracts” meant something. Deal (2007) identified that older generations of people believe they are hardworking and consider younger generations as having less work ethic and hence lower levels of commitment to complete processes. Henry (2015) added that older people have been described as being more concerned with process than results, and they are portrayed as having a strong sense of loyalty. In this study, participants' loyalty was their commitment to the program, and this loyalty was also a motivating factor to continue in and be actively involved in the program.

## **Continuing in and Being Actively Engaged in the Program**

Three aspects of being actively engaged and therefore continuing in the program were identified: being treated as an individual and in a person-centered way, personal benefits, and connectedness, which involves social connection.

All participants spoke of the person-centered way they were treated during the program and how valuable that was to them. They felt like individuals. Participants felt strong commitment to the program when they encountered individual tailoring—when they felt they were the center of the program and perceived it met their needs. Muller-Riemenschneider, Reinhold, Nocon, and Willich (2008) support this concept with older adults, stating that a tailored approach, with personal contact, promotes individuals' development of long-term patterns of physical activity and associated behaviors as well as accountability and commitment to the group and the program. Balducci et al. (2014) suggested that tailored programs are critical to helping improve functional status in older adults and that benefits can be more targeted to individual needs when participant commitment is evident.

It appeared that participants found that individualization and choice were important. They appreciated structure and direction, which the program gave, but felt that individual allowances were incorporated into each session. These allowances were tailored to each person according to disease or age-related barriers they may have been facing, and they further contributed to commitment to the program (Balducci et al., 2014; Valencia, Stoutenberg, & Florez, 2014).

Being treated as an individual and in a person-centered way is underpinned by the values and philosophies of "empathy, dignity, autonomy, respect, choice, transparency, and desire to help individuals lead the life they want" (Reid-Searl, Levett-Jones, Cooper, & Happell, 2014, p. 486). Person-centeredness focuses on the uniqueness of the individual and hence the importance of customizing service delivery to the needs and requests of the person, supporting the person's rights, values, and beliefs with the intention of maximizing the person's potential (Moyle, Parker, & Bramble, 2014). The strengths-based approach of the program moved attention to the people and their abilities, focusing on the fact that individuals have strengths that can be used and developed to promote ownership of their own health, care, or service delivery and contribute to improving their quality of life (Moyle et al., 2014; Xie, 2013). This is important when considering older people with diabetes who are able to contribute to improving their quality of life when involved in exercise and health promotion through empowerment and self-efficacy (Gottlieb, 2014). These factors encourage commitment to a program and were evident in this research study.

In this research, commitment to the program was fortified when the individual needs of participants were met in a person-centered manner. It was also encouraged when they could see and feel personal benefits.

Personal benefits to the participants are necessary to continue in and be actively engaged in a program. Participants described benefits as biophysical and/or psychological. Ease of access was also described as a personal benefit that helped them commit to the program.

All participants described positive biophysical benefits such as changes to body shape or decreased blood glucose levels. Experiencing biophysical benefits, and ultimately tangible improvements in health, reinforced participants' commitment to the program. Physical activity is beneficial for healthy aging (Young, Angevaren, Rusted, & Tabet, 2015), enabling an individual to grow older in good health with independence in daily living and interacting within society (Murtagh, Murphy, Murphy, Woods, & Lane, 2014). Multiple studies have demonstrated that regular exercise in older people with diabetes leads to significant improvements in physical functioning (Apostolopoulos, Borkoles, Polman, & Stojanovska, 2014; Balducci et al., 2014; Ferriolli, Pessanha, & Marchesi, 2014; National Institute for Health and Care Excellence, 2014; Patil et al., 2015; Wozniak, Soprovich, Mundt, Johnson, & Johnson, 2015). When older people with diabetes see physical benefits from exercise, they are more likely to be motivated to continue (Lascar et al., 2014). Physical results identified by participants in this research encouraged their ongoing commitment and for them to exercise more seriously. The older person with diabetes' physical experience during exercise and then the ensuing results were important in terms of making sustainable lifestyle changes (Toft & Uhrenfeldt, 2014). Merleau-Ponty, a prominent phenomenologist from the 20<sup>th</sup> century, stated that the lived body is habitual (van Manen, 2014) and hence physical benefits drive ongoing motivation and commitment.

Psychological benefits, in the form of personal emotional well-being, were often described by participants and repeatedly voiced as key to being involved in the program. Psychological benefits are inclusive of emotional and mental benefits that participants identified. Positive feelings and enhanced positivity were spoken about by participants as emotional benefits. Improvements in clarity and thinking were described by participants as mental benefits. Delaney, Crandell, and Barfield (2014) found in their research that noncompetitive exercise-based therapeutic programs can enhance the mood and the self-confidence participants experience as they undertake an exercise and health promotion program. Additionally, Ferriolli et al. (2014) and Skov-Ettrup, Petersen, Curtis, and Lykke (2014) discovered in their research that self-esteem and perceived quality of life were enhanced during health promotion program participation.

Participants spoke of how being a part of the program made them feel good about themselves. They verbalized that they felt "so much better about myself." This then led to coming "along the next time," as "doubt" was left be-

hind and “positivity” replaced it. This was a key factor in their commitment to continuing in the program and being actively engaged.

According to Hebblethwaite (2013) and Song and Kong (2015), feelings associated with increased well-being and improved self-determination and coping contribute to successful and healthy aging in older people. Acceptance of self, coping with illness (diabetes), and adapting to undertaking the program while feeling in control led participants to speak about how they felt more positive during the program and hence wanted to continue attending. This concept is discussed in literature as realistic optimism (Song & Kong, 2015) and enables older people to adapt and continue to experience good health (Ebrahimi, Wilhelmson, Moore, & Jakobsson, 2012; From, Johansson, & Athlin, 2007).

When older people with chronic diseases (diabetes being one) are more physically active, there is a higher incidence of positive thoughts (Guicciardi et al., 2014). This is particularly connected to their diabetes management and consequently their commitment to continuing in and engaging in a program (Gallagher, Zelestis, Hollams, Denney-Wilson, & Kirkness, 2014).

Another contributor to committing to continuing in and engaging in the program was ease of access to the exercise and health promotion program. Participants valued the accessibility of the program and noted that there being no associated cost was particularly important. Close and easy parking and access to public transport and the program environment were significant to commitment. Van Stralen, De Vries, Mudde, Bolman, and Lechner (2009) confirmed that access is an important consideration in an older person's decision to choose an exercise program and maintain commitment to it.

Participants described difficulty in maintaining exercise and healthy eating when there was not the same level of “support” and “feedback” they had received in the program. This was associated with cost, but also with motivation to continue without the ongoing support they had received and valued throughout the program. In relation to the participants maintaining levels of exercise after the program concluded, only one continued to engage in the leisure center activities for older people. Participants lamented that they were not able to continue, with all reasons centered on cost and the inability to afford to pay for programs or membership. In the focus group discussion, participants explained: “I wouldn't have been [able to be] here apart from that [free program]” (P1).

Others reiterated the point of inaccessibility to continue once payment was required: “As I said I loved every minute of it, loved it. If I can afford I will be going back. I've actually thought of hinting to my daughter that she can give it to me for a mother's day present” (P13). Another participant said, “Now I've just gone back to walking again because like probably a lot of people in the same situation as me, we can't afford to join a program. I was sorry when it ended” (P9).

Connectedness was the third aspect that reinforced commitment to continuing in and engaging in the program. Participants acknowledged that they shared a sense of community and connectedness to each other. Fun and camaraderie, which are important aspects of connectedness because humans need these in their social relationships (Hebblethwaite, 2013), were offered as affordances of the program and emerged as important contributors to participants committing to the program. This finding is reflective of Skov-Ettrup et al. (2014) findings that fun and camaraderie are integral to older adults entering and remaining in an exercise program. Further, the fact that all participants were from the same generation, had a shared disease, and had reasonably homogeneous life experiences contributed to a level of perceived comfort, safety, and connectedness. Participants described this as contributing to a meaningful and fun experience. Participants discussed how they enjoyed getting to know the other participants and spending time with them. This, they said, facilitated commitment to attending the program as time went on, essentially so they could connect with others and feel like they belonged. This got stronger as the program continued: "I looked forward to seeing people" (P14).

Older people desire social engagement and as such, Stumbo et al. (2015) said, seek opportunities to be involved with others. The social aspect of a health promotion program is attractive to this population, and this sense of connectedness often means more than the actual exercise component (Johnston, Irving, Mill, Rowan, & Liddy, 2012). To have fun and be with others is an instigator and motivator to continuing in and engaging in a program (Skov-Ettrup et al., 2014). Finding connection with others in a program allows for promotion of health in older people living in the community and thereby improves a leisure lifestyle (Fogarty, Farrell, & Gutmanis, 2014).

In this research, participants described how the instructor created a sense of connectedness—individualizing and focusing on people rather than on the program. They were treated in a person-centered way, making them feel valued. This contributed to wanting to continue to attend and engage in the program. Van Stralen et al. (2009) found that the effect of the instructor was key in helping participants maintain commitment to an exercise program. Participants also reported the connection with the instructor was a factor in their commitment to the program.

## **Implications and Future Research**

When participants are treated as an individual and in a person-centered way, when they see personal benefits and find connectedness, change occurs. Program efficacy was achieved when participants with diabetes felt they were able to contribute to improving their quality of life when involved in an exercise and health promotion program. Empowerment and self-efficacy, in whatever

capacity or meaning that had to the person, led to commitment and engagement in the program.

All participants spoke of the person-centered way they were treated during the program and how valuable that was to them. They felt like individuals. A key characteristic of person-centeredness is relationship, when the individual feels empowered and finds meaning in the interaction (Jacobs, 2015). When support is present in such programs, self-efficacy is increased and management of diabetes improves, including meeting recommended exercise guidelines (Hu et al., 2014; Strom Williams, Walker, Lynch, Voronca, & Egede, 2015).

It is clear that programs such as Beat It can play a meaningful and important role in dealing with diabetes and how to surmount associated difficulties of the chronic disease. Such programs are associated with working with and enabling the “whole person” (Carruthers & Hood, 2007, p. 276), focusing on ability to build on personal strengths and thereby enhance positive emotion and capacity (Stumbo et al., 2015).

Considerations for future programs and people with diabetes encompass the findings that people will engage more with programs if they are individualized and enable choice. Future research should be undertaken to explore aspects of why and how commitment is made to health promotion programs by people with diabetes and other chronic health diseases. This would be important in discovering why participants engage in such programs.

It would be useful to conduct a large-scale study that would enable more generalizability of findings. Another direction for future research would be to investigate the long-term implications of health effects and benefits for people with diabetes who engage in exercise and health promotion programs. A longitudinal study of these outcomes could inform financial implications associated with being a part of a program.

## Conclusion

For older people with diabetes undertaking exercise and health promotion programs such as Beat It, it is essential that commitment to personal health is established and maintained. How this is achieved is different for different people. However, this research has demonstrated that commitment to *sign up and be a part of* and *continue in and be actively engaged* in a program will be enhanced in older people with diabetes when particular aspects are fortified within the program:

- When programs are designed for homogeneous groups in terms of age and disease processes, participants are likely to sign up for the program and then commit as they have common grounds to build upon.
- When programs are person-centered and can individualize effectively, then older people with diabetes will see value and want to sign up and continue to engage.

- When programs enable personal benefits to be seen and felt in a real and purposive way—be it physical and/or psychological— participants will experience commitment to ongoing engagement in the program.
- When programs allow participants to connect with each other and form relationships, the individual feels empowered and finds meaning in the interaction (Jacobs, 2015), and they are then more likely to continue to engage and commit to the program.

These factors are critical to understanding an older person with diabetes's commitment to signing up for and then continuing to engage actively in a program. Many older people with diabetes do not follow recommended guidelines for exercise or nutritional eating. This can be partly attributed to inadequate support for such activities and can also be due to ineffective programs for older people with diabetes (Wozniak et al., 2015). Because diabetes is a chronic disease that necessitates lifelong engagement in and commitment to healthy living to augment health and well-being (ADA, 2016; Linmans, Knottnerus, & Spigt, 2015), older people with diabetes must have an audible voice, a voice that is heard and listened to (McQueen, 2015), acknowledged, and incorporated into structuring and planning programs. The factors above can help to inform the effective design and construction of other exercise and health promotion programs to assist older individuals with diabetes to establish patterns of exercise and good health routines.

## References

- American Diabetes Association. (2016). Standards of medical care in diabetes—2016. *Diabetes Care*, 39(S1), S1–S106.
- Angevaren, M., Aufdemkampe, G., Verhaar, H. J. J., Aleman, A., & Vanhees, L. (2008). Physical activity and enhanced fitness to improve cognitive function in older people without known cognitive impairment. *Cochrane Database of Systematic Reviews*, 3, 1–73.
- Annuzzi, G., Rivellese, A. A., Bozzetto, L., & Riccardi, G. (2014). The results of Look AHEAD do not row against the implementation of lifestyle changes in patients with type 2 diabetes. *Nutrition, Metabolism, and Cardiovascular Diseases*, 24(1), 4–9.
- Apostolopoulos, V., Borkoles, E., Polman, R., & Stojanovska, L. (2014). Physical and immunological aspects of exercise in chronic diseases. *Immunotherapy*, 6, 1145–1157.
- Armour, M., Rivaux, S. L., & Bell, H. (2009). Using context to build rigor: Application to two hermeneutic phenomenological studies. *Qualitative Social Work*, 8(1), 101–122.
- Australian Diabetes Council. (2011). *Beat It. Physical activity and lifestyle program training course manual*. Sydney, Australia: Author.

- Australian Institute of Health and Welfare. (2016). How many Australians have diabetes? Retrieved from <http://www.aihw.gov.au/how-common-is-diabetes/>
- Balducci, S., Sacchetti, M., Haxhi, J., Orlando, G., D'Errico, V., Fallucca, S., . . . Pugliese, G. (2014). Physical exercise as therapy for type 2 diabetes mellitus. *Diabetes/Metabolism Research and Reviews*, 30(S1), 13–23.
- Baptista, D. R., Wiens, A., Pontarolo, R., Regis, L., Reis, W. C. T., & Correr, C. J. (2016). The chronic care model for type 2 diabetes: A systematic review. *Diabetology & Metabolic Syndrome*, 8(7), 1–7. <https://doi.org/10.1186/s13098-015-0119-z>
- Barrett, J. E., Plotnikoff, R. C., Courneya, K. S., & Raine, K. D. (2007). Physical activity and type 2 diabetes: Exploring the role of gender and income. *The Diabetes Educator*, 33(1), 128–143.
- Berger, S. (2010). The meaning of leisure for older adults living with vision loss. *Occupational Therapy Journal of Research*, 31, 193–199.
- Boudreau, F., & Godin, G. (2014). Participation in regular leisure-time physical activity among individuals with type 2 diabetes not meeting Canadian guidelines: The influence of intention, perceived behavioral control, and moral norm. *International Journal of Behavioral Medicine*, 21, 918–926.
- Brouwer, B. G., Van Der Graaf, Y., Soedamah-Muthu, S. S., Wassink, A. M. J., & Visseren, F. L. J. (2010). Leisure-time physical activity and risk of type 2 diabetes in patients with established vascular disease or poorly controlled vascular risk factors. *Diabetes Research in Clinical Practice*, 87, 372–378.
- Brown, R. E., Riddell, M. C., Macpherson, A. K., Canning, K. L., & Kuk, J. L. (2014). All-cause and cardiovascular mortality risk in U.S. adults with and without type 2 diabetes: Influence of physical activity, pharmacological treatment, and glycemic control. *Journal of Diabetes and Its Complications*, 28, 311–315.
- Brug, J., Conner, M., Harre, N., Kremers, S., McKellar, S., & Whitelaw, S. (2005). The transtheoretical model and stages of change: A critique. *Health Education Research*, 20, 244–258.
- Buchman, A. S., Wilson, R. S., Yu, L., James, B. D., Boyle, P. A., & Bennett, D. A. (2014). Total daily activity declines more rapidly with increasing age in older adults. *Archives of Gerontology and Geriatrics*, 58(1), 74–79.
- Carruthers, C., & Hood, C. (2007). Building a life of meaning through therapeutic recreation: The leisure and well-being model, Part 1. *Therapeutic Recreation Journal*, 41, 276–297.
- Carson, A. P., Williams, L. B., & Hill, A. N. (2014). Physical activity in diabetes: Is any better than none? *Journal of Diabetes Complications*, 28, 257–258.
- Cashin, G. H., Small, S. P., & Solberg, S. M. (2008). The lived experience of fathers who have children with asthma: A phenomenological study. *Journal of Pediatric Nursing*, 23, 372–385.

- Centis, E., Moscatiello, S., Bugianesi, E., Bellentani, S., Fracanzani, A. L., Calugi, S., . . . Marchesini, G. (2013). Stage of change and motivation to healthier lifestyle in non-alcoholic fatty liver disease. *Journal of Hepatology*, 58, 771–777.
- Centis, E., Trento, M., Dei Cas, A., Pontirolli, A. E., Feo, P., Bruno, A., . . . Marchesini, G. (2014). Stage of change and motivation to healthy diet and habitual physical activity in type 2 diabetes. *Acta Diabetologica*, 51, 559–566.
- Charmaz, C. (2014). *Constructing grounded theory* (2nd ed.). Los Angeles, CA: Sage.
- Chen, C. M., Chang, W. C., & Lan, T. Y. (2014). Identifying factors associated with changes in physical functioning in an older population. *Geriatrics & Gerontology International*, 15, 156–164.
- Chesla, C. A. (1995). Hermeneutic phenomenology: An approach to understanding families. *Journal of Family Nursing*, 1(1), 63–78.
- Crotty, M. (1996). *Phenomenology and nursing research*. Melbourne, Australia: Churchill Livingstone.
- Deal, J. (2007). *Retiring the generation gap: How employees young and old can find common ground*. San Francisco, CA: Jossey-Bass.
- Delaney, B., Crandell, D., & Barfield, J. P. (2014). Sport-based therapeutic recreation: Perceived outcomes and implications for research. *Palaestra*, 28(3), 12–16.
- Desveaux, L., Beauchamp, M., Goldstein, R., & Brooks, D. (2014). Community-based exercise programs as a strategy to optimize function in chronic disease: A systematic review. *Medical Care*, 52, 216–226.
- Diabetes Australia. (2016). Diabetes map. Retrieved from <https://www.ndss.com.au/diabetes-map>
- Ebrahimi, Z., Wilhelmson, K., Moore, C., & Jakobsson, A. (2012). Frail elders' experiences with and perceptions of health. *Qualitative Health Research*, 22, 1513–1523.
- Ferrer, R. L., Cruz, I., Burge, S., Bayles, B., & Castilla, M. I. (2014). Measuring capability for healthy diet and physical activity. *Annals of Family Medicine*, 12(1), 46–56.
- Ferriolli, E., Pessanha, F. P., & Marchesi, J. C. (2014). Diabetes and exercise in the elderly. *Medical Sports Science*, 60, 122–129.
- Fogarty, J., Farrell, B., & Gutmanis, I. (2014). Promoting healthy living for seniors: Evaluation of a community-based program. *Therapeutic Recreation Journal*, 48, 262–274.
- Fritz, H. A. (2015). Learning to do better: The transactional model of diabetes self-management integration. *Qualitative Health Research*, 25, 875–886.

- From, I., Johansson, I., & Athlin, E. (2007). Experiences of health and well-being, a question of adjustment and compensation - Views of older people dependent on community care. *International Journal of Older People Nursing*, 2, 278–287.
- Funnell, M. M., Brown, T. L., Childs, B. P., Haas, L. B., Hosey, G. M., Jensen, B., . . . Weiss, M. A. (2010). National standards for diabetes self-management education. *Diabetes Care*, 33(S1), S89–S96.
- Gallagher, R., Zelestis, E., Hollams, D., Denney-Wilson, E., & Kirkness, A. (2014). Impact of the Healthy Eating and Exercise Lifestyle Programme on depressive symptoms in overweight people with heart disease and diabetes. *European Journal of Preventive Cardiology*, 21, 1117–1124.
- Giorgi, A. (1997). The theory, practice, and evaluation of the phenomenological method as a qualitative research procedure. *Journal of Phenomenological Psychology*, 28, 235–260.
- Gottlieb, L. (2014). Strengths-based nursing: A holistic approach to care, grounded in eight core values. *American Journal of Nursing*, 114(8), 24–32.
- Grbich, C. (2013). *Qualitative data analysis: An introduction*. London, England: Sage.
- Guicciardi, M., Lecis, R., Anziani, C., Corgiolu, L., Porru, A., Pusceddu, M., & Spanu, F. (2014). Type 2 diabetes: Negative thoughts to physical activity. *Sport Sciences for Health*, 10, 247–251.
- Haas, L., Marynuik, M., Beck, J., Cox, C. E., Duker, P., . . . Edwards, L. (2014). National standards for diabetes self-management education and support. *Diabetes Care*, 37(Suppl. 1), S144–S153.
- Hebblethwaite, S. (2013). “I think that it could work but. . .”: Tensions between the theory and practice of person-centred and relationship-centred care. *Therapeutic Recreation Journal*, 47, 13–34.
- Henderson, J., Wilson, C., Roberts, L., Munt, R., & Crotty, M. (2014). Social barriers to type 2 diabetes self-management: The role of capital. *Nursing Inquiry*, 21, 336–345.
- Henry, A. (2015). *Inspiring tomorrow's leaders today: Breaking down generational barriers at work*. Rozelle, Australia: Avril Henry.
- Howe, T. E., Rochester, L., Neil, F., Skelton, D., & Ballinger, C. (2012). Physical activity and exercise for health and well being of older people. *Cochrane Database of Systematic Reviews*, 8, 1–4.
- Hu, J., Wallace, D. C., McCoy, T. P., & Amirehsani, K. A. (2014). A family-based diabetes intervention for Hispanic adults and their family members. *The Diabetes Educator*, 40, 48–59.
- Huang, J. H., Cheng, F. C., Tsai, L. C., Lee, N. Y., & Lu, Y. F. (2014). Appropriate physical activity and dietary intake achieve optimal metabolic control in older type 2 diabetes patients. *Journal of Diabetes Investigation*, 5, 418–427.

- Jacobs, G. (2015). The currentness of person-centred practice. *International Practice Development Journal*, 5(S1), 1–3.
- Jennings, C. A., Vandelanotte, C., Caperchione, C. M., & Mummery, W. K. (2014). Effectiveness of a web-based physical activity intervention for adults with type 2 diabetes—A randomised controlled trial. *Preventive Medicine*, 60, 33–40.
- Johnston, S., Irving, H., Mill, K., Rowan, M., & Liddy, C. (2012). The patient's voice: An exploratory study of the impact of a group self-management support program. *BMC Family Practice*, 13, 65–72.
- Ku, G. M. V., & Kegels, G. (2015). Knowledge, attitudes, and perceptions of people with type 2 diabetes as related to self-management practices: Results of a cross-sectional study conducted in Luzon, Philippines. *Chronic Illness*, 11, 93–107.
- Lakerveld, J., Bot, S. D., van der Ploeg, H. P., & Nijpels, G. (2013). The effects of a lifestyle intervention on leisure-time sedentary behaviors in adults at risk: The Hoorn Prevention Study, a randomized controlled trial. *Preventive Medicine*, 57, 351–356.
- Lascar, N., Kennedy, A., Hancock, B., Jenkins, D., Andrews, R., Greenfield, S., & Narendran, P. (2014). Attitudes and barriers to exercise in adults with type 1 diabetes (T1DM) and how best to address them: A qualitative study. *PLoS ONE*, 9(9), 1–8.
- Law, K. H., How, C. H., Ng, C. S., & Ng, M. C. W. (2013). Prescribing health: Exercise. *Singapore Medical Journal*, 54, 303–308.
- Li, L. (2014). The financial burden of physical inactivity. *Journal of Sport and Health Science*, 3(1), 58–59.
- Linmans, J. J., Knottnerus, J. A., & Spigt, M. (2015). How motivated are patients with type 2 diabetes to change their lifestyle? A survey among patients and healthcare professionals. *Primary Care Diabetes*, 9, 439–445.
- Luo, X., Liu, T., Yuan, X., Ge, S., Yang, J., Li, C., & Sun, W. (2015). Factors influencing self-management in Chinese adults with type 2 diabetes: A systematic review and meta-analysis. *International Journal of Environmental Research and Public Health*, 12, 11304–11327.
- MacKee, N. (2014). Diabetes burden hits hospitals. *MJA*, 201(6), 334–338.
- Mackey, S. (2005). Phenomenological nursing research: Methodological insights derived from Heidegger's interpretive phenomenology. *International Journal of Nursing Studies*, 42, 179–186.
- Majeed-Ariss, R., Jackson, C., Knapp, P., & Cheater, F. M. (2015). A systematic review of research into Black and ethnic minority patients' views on self-management of type 2 diabetes. *Health Expectations: An International Journal of Public Participation in Health Care and Health Policy*, 18, 625–642.

- Mason, M. (2010). Sample size and saturation in PhD studies using qualitative interviews. *Forum: Qualitative Social Research, 11*(3). Retrieved from <http://www.qualitative-research.net/index.php/fqs/article/view/1428/3027>
- McQueen, F. (2015). The influence of really listening: Learning what excellence in care looks like. *International Practice Development Journal, 5*(2), 1–2.
- Miles, M., Chapman, Y., Francis, K., & Taylor, B. (2013). Exploring Heideggerian hermeneutic phenomenology: A perfect fit for midwifery research. *Women and Birth, 26*, 273–276.
- Montesi, L., Moscatiello, S., Malavolti, M., Marzocchi, R., & Marchesini, G. (2013). Physical activity for the prevention and treatment of metabolic disorders. *Internal and Emergency Medicine, 8*, 655–666.
- Moyle, W., Parker, D., & Bramble, M. (2014). *Care of older adults: A strength-based approach*. Sydney, Australia: Cambridge University Press.
- Muller-Riemenschneider, F., Reinhold, T., Nocon, M., & Willich, S. N. (2008). Long-term effectiveness of interventions promoting physical activity: A systematic review. *Preventive Medicine, 47*, 354–368.
- Murtagh, E., Murphy, M., Murphy, N., Woods, C., & Lane, A. (2014). *Physical activity, ageing, and health*. Belfast, Ireland: Centre for Ageing Research and Development in Ireland.
- National Institute for Health and Care Excellence. (2014, September). Physical activity in older people and healthy ageing. *Eyes on Evidence, 2014*, 1–2.
- O’Neil, A., Williams, E. D., Browne, J. L., Horne, R., Pouwer, F., & Speight, J. (2014). Associations between economic hardship and markers of self-management in adults with type 2 diabetes: Results from Diabetes MILES – Australia. *Australian and New Zealand Journal of Public Health, 38*, 466–472.
- Paley, J. (2013). Heidegger, lived experience and method. *Journal of Advanced Nursing, 70*, 1520–1531.
- Park, S. W., Goodpaster, B. H., Strotmeyer, E. S., de Rekeneire, N., Harris, T. B., Schwartz, A. V., . . . Newman, A. (2007). Accelerated loss of skeletal muscle strength in older adults with type 2 diabetes: The health, aging, and body composition study. *Diabetes Care, 30*, 1507–1512.
- Paterson, B. L. (2001). The shifting perspectives model of chronic illness. *Journal of Nursing Scholarship, 33*(1), 21–26.
- Patil, R., Uusi-Rasi, K., Tokola, K., Karinkanta, S., Kannus, P., & Sievanen, H. (2015). Effects of a multimodal exercise program on physical function, falls, and injuries in older women: A 2-year community-based, randomized controlled trial. *Journal of the American Geriatric Society, 63*, 1306–1313.
- Polit, D., & Beck, C. (2014). *Essentials of nursing research: Appraising evidence for nursing practice*. Philadelphia, PA: Lippincott, Williams, & Wilkins.

- Powers, M. A., Bardsley, J., Cypress, M., Duker, P., Funnell, M. M., . . . Hess, A. (2015). Diabetes self-management education and support in type 2 diabetes: A joint position statement of the American Diabetes Association, the American Association of Diabetes Educators, and the Academy of Nutrition and Dietetics. *Diabetes Care*, 39, 1–11. <https://doi.org/10.2337/dc15-0730>
- Prochaska, J. O., & DiClemente, C. C. (1983). Stages and processes of self-change of smoking: Toward an integrative model of change. *Journal of Consultative Clinical Psychology*, 51, 390–395.
- Rahi, B., Morais, J. A., Dionne, I. J., Gaudreau, P., Payette, H., & Shatenstein, B. (2014). The combined effects of diet quality and physical activity on maintenance of muscle strength among diabetic older adults from the NuAge cohort. *Experimental Gerontology*, 49, 40–46.
- Reid-Searl, K., Levett-Jones, T., Cooper, S., & Happell, B. (2014). The implementation of Mask-Ed: Reflections of academic participants. *Nurse Education in Practice*, 14, 485–490.
- Rydeskog, A., Frändin, K., & Hansson Scherman, M. (2005). Elderly people's experiences of resistance training. *Advances in Physiotherapy*, 7(4), 162–169.
- Schneider, K. L., Andrews, C., Hovey, K. M., Seguin, R. A., Manini, T., Lamonte, M. J., . . . Pagoto, S. L. (2014). Change in physical activity after a diabetes diagnosis: Opportunity for intervention. *Medicine & Science in Sports & Exercise*, 46, 84–91.
- Shah, B. R., Hwee, J., Cauch-Dudek, K., Ng, R., & Victor, J. C. (2015). Diabetes self-management education is not associated with a reduction in long-term diabetes complications: An effectiveness study in an elderly population. *Journal of Evaluation in Clinical Practice*, 21, 656–661.
- Skov-Ettrup, L. S., Petersen, C. B., Curtis, T., & Lykke, M. (2014). Why do people exercise? A cross-sectional study of motives to exercise among Danish adults. *Public Health*, 128, 482–484.
- Sluik, D., Buijsse, B., Muckelbauer, R., Kaaks, R., Teucher, B., Johnsen, N. F., . . . Amiano, P. (2012). Physical activity and mortality in individuals with diabetes mellitus: A prospective study and meta-analysis. *Archives of Internal Medicine*, 172, 1285–1295.
- Song, M., & Kong, E. H. (2015). Older adults' definitions of health: A metasynthesis. *International Journal of Nursing Studies*, 52, 1097–1106.
- Stanton, R., Reaburn, P., & Happell, B. (2013). Is cardiovascular or resistance exercise better to treat patients with depression? A narrative review. *Issues in Mental Health Nursing*, 34, 531–538.
- Stellefson, M., Dipnarine, K., & Stopka, C. (2013). The chronic care model and diabetes management in US primary care settings: A systematic review. *Preventing Chronic Disease*, 10, 1–21. <https://doi.org/10.5888/pcd10.120180>

- Streubert, H., & Carpenter, D. (2011). *Qualitative research in nursing: Advancing the humanistic interpretation*. Philadelphia, PA: Lippincott, Williams, & Wilkins.
- Strom Williams, J., Walker, R. J., Lynch, C. P., Voronca, D., & Egede, L. E. (2015). Meaning of illness and self-care in patients with type 2 diabetes. *The Diabetes Educator, 41*, 301–308.
- Stumbo, N. J., Wilder, A., Zahl, M., Devries, D., Pegg, S., Greenwood, J., & Ross, J. E. (2015). Community integration: Showcasing the evidence for therapeutic recreation services. *Therapeutic Recreation Journal, 49*, 35–60.
- Tang, T. S., Funnell, M. M., Sinco, B., Spencer, M. S., & Heisler, M. (2015). Peer-led, empowerment-based approach to self-management efforts in diabetes (PLEASED): A randomized controlled trial in an African American community. *Annals of Family Medicine, 13*(S1), S27–S35.
- Toft, B., & Uhrenfeldt, L. (2014). Facilitators and barriers to physical activity experienced among morbidly obese adults: A systematic review protocol of qualitative evidence. *JBI Database of Systematic Reviews & Implementation Reports, 12*(6), 12–23.
- Vähäsarja, K., Salmela, S., Villberg, J., Rintala, P., Vanhala, M., Saaristo, T., . . . Poskiparta, M. (2012). Perceived need to increase physical activity levels among adults at high risk of type 2 diabetes: A cross-sectional analysis within a community-based diabetes prevention project FIN-D2D. *BMC Public Health, 12*, 1–10.
- Valencia, W., Stoutenberg, M., & Florez, H. (2014). Weight loss and physical activity for disease prevention in obese older adults: An important role for lifestyle management. *Current Diabetes Reports, 14*(10), 1–10.
- van Manen, M. (1990). *Researching lived experience: Human science for an action sensitive pedagogy*. London, Canada: The University of Western Ontario.
- van Manen, M. (2014). *Phenomenology of practice: Meaning-giving methods in phenomenological research and writing*. Walnut Creek, CA: Left Coast Press.
- van Stralen, M. M., De Vries, H., Mudde, A. N., Bolman, C., & Lechner, L. (2009). Determinants of initiation and maintenance of physical activity among older adults: A literature review. *Health Psychology Review, 3*, 147–207.
- Wasenius, N., Venojärvi, M., Manderöos, S., Surakka, J., Lindholm, H., Heinonen, O. J., . . . Aunola, S. (2014). Unfavorable influence of structured exercise program on total leisure-time physical activity. *Scandinavian Journal of Medicine & Science in Sports, 24*, 404–413.
- Wimalawansa, S. J. (2013). Thermogenesis-based interventions for obesity and type 2 diabetes mellitus. *Expert Review of Endocrinology & Metabolism, 8*, 275–288.

- Wisse, W., Rookhuizen, M. B., De Kruif, M. D., van Rossum, J., Jordans, I., ten Cate, H., . . . Meesters, E. W. (2010). Prescription of physical activity is not sufficient to change sedentary behavior and improve glycemic control in type 2 diabetes patients. *Diabetes Research in Clinical Practice*, 88(2), e10–e13.
- World Health Organization. (2015a). Diabetes fact sheet 312. Retrieved from <http://www.who.int/mediacentre/factsheets/fs312/en/>
- World Health Organization. (2015b). Health topics: Physical activity. Retrieved from [http://www.who.int/topics/physical\\_activity/en/](http://www.who.int/topics/physical_activity/en/)
- Wozniak, L., Soprovich, A., Mundt, C., Johnson, J., & Johnson, S. (2015). Contextualizing the proven effectiveness of a lifestyle intervention for type 2 diabetes in primary care: A qualitative assessment based on the RE-AIM framework. *Canadian Journal of Diabetes*, 39(S3), S92–S99.
- Wu, C. J. J., & Chang, A. M. (2014). Application of a theoretical framework to foster a cardiac-diabetes self-management programme. *International Nursing Review*, 61, 336–343.
- Xie, H. (2013). Strengths-based approach for mental health recovery. *Iranian Journal of Psychiatry and Behavioral Sciences*, 7(2), 5–10.
- Young, J., Angevaren, M., Rusted, J., & Tabet, N. (2015). Aerobic exercise to improve cognitive function in older people without known cognitive impairment. *Cochrane Database of Systematic Reviews*, 4, 1–3.
- Zanetti, G. G., Hodniki, P. P., De Moraes, C., Dal-Fabbro, A. L., Zanetti, A. C. G., Zanetti, M. L., & De Souza-Teixeira, C. (2014). Investigating telephone support as a strategy to increase the physical activity levels of people with diabetes. *Journal of Diabetes Nursing*, 18(1), 32–36.