

DIABETES AND MENTAL HEALTH PEER SUPPORT PROJECT
EVALUATION REPORT

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Executive Summary

Previous literature has demonstrated that there is a correlation between diabetes and mental illness, a link between antipsychotic medication and the development of diabetes in mental health patients, and evidence of lower quality of diabetic care for individuals with serious mental illness. It is therefore necessary to educate the mental health sector on the risk of developing diabetes and on the need for self-management of diabetes.

Diabetes and Mental Health Peer Support Training Module

A Diabetes and Mental Health Peer Support Training Module was developed with two main objectives:

1. To increase the skills of mental health peer support workers in providing support for the prevention and self-management of diabetes in people living with serious mental illness.
2. To increase awareness in the diabetes community of the role mental health peer support workers can play in prevention and self-management support.

The Diabetes and Mental Health Peer Support Training Module was pilot tested by peer support workers affiliated with Ontario Peer Development Initiative (OPDI) member consumer/survivor initiatives (CSIs) within eight regions across Ontario. Two complementary modules were developed: a “Train the Trainer” module to train one trainer per region and a “Regional Training Session” module to train numerous peer support workers per region.

Evaluation Strategy

An evaluation of the project was conducted by Dr. Cheryl Forchuk and Amanda Meier of Lawson Health Research Institute. The purpose of the evaluation was to receive feedback from

participants on diabetes knowledge, on what should remain the same in the training modules, and on what should be changed in the modules. This feedback will be used to revise the modules that will be distributed provincially. A variety of evaluation methods were used:

1. A one-on-one telephone interview was administered to evaluate the “Train the Trainer” module.
2. A Diabetes Knowledge Test was administered to evaluate the level of diabetes knowledge obtained during the “Regional Training Session” module.
3. Focus groups were held to receive feedback on the “Regional Training Session” module.
4. Online follow-up surveys were administered to gain insight into how participants used the knowledge and supports one-year post-training.

Results

Results for both the “Train the Trainer” module and “Regional Training Session” module were very positive. Participants expressed increased knowledge and enjoyment from the training sessions. Evaluation of diabetes knowledge for both modules indicated the importance of covering core diabetes knowledge in the training modules. Participants were still lacking in some diabetes knowledge post-training and expressed a desire to spend more time learning about core diabetes information. Other feedback for the “Train the Trainer” module included the suggestion for more time spent on rehearsing group facilitation. Other feedback for the “Regional Training Session” module included requests for lengthier training modules, more time spent on role-playing in peer support roles and additional materials and refresher courses offered in future.

Conclusions

Overall, the project increased diabetes knowledge for peer support workers and increased confidence for peer support workers to speak about diabetes and mental illness at their CSIs. Feedback from participants was generally positive and any critiques were valuable in forming recommendations for future training modules.

Introduction

Diabetes and Mental Illness

The poor physical health status of people with mental illness is very striking. It is estimated that people with serious mental illness have a shorter life span, by 25 years, relative to the general population (Parks, 2006). Among the many health problems facing this population, the high risk of diabetes is well-documented. Diabetes is not only more prevalent in the population of people living with serious mental illnesses but also under-diagnosed and under-treated relative to the general population. Rates of diabetes are two to four times greater and studies have found a 25-33% incidence of previously undiagnosed pre-diabetes and diabetes in community-based cohorts, as well as higher rates of complications developing earlier in the course of the illness (McEvoy et al. 2005).

Previous research outlines a strong correlation between diabetes and mental illness. El-Mallakh (2007) states that diabetes is more common among individuals with schizophrenia and schizoaffective disorders than in the general population. Cassidy et al. (1999) report a higher overall frequency of diabetes in hospitalized patients diagnosed with bipolar disorder than the general population. They state that the association between bipolar and diabetes is clinically relevant and underscores the importance of screening for diabetes in the bipolar population. As

well, in their review of the literature, Anderson et al. (2001) found that individuals with diabetes were twice as likely to have depression when compared to individuals in the same setting without diabetes.

There is a proven link between the use of antipsychotic medication and the development of diabetes in mental health patients (Citrome, 2004; Dixon et al., 2004; El-Mallakh, 2007; & Farwell et al., 2004). Hammerman et al. (2008) found that diabetes was more prevalent among patients treated with antipsychotics (11.1%) compared to patients not on antipsychotics (4.4%), and that the prevalence of diabetes was higher among recipients of antipsychotics in younger age groups.

There is also evidence of lower quality of diabetic care for those with serious mental illnesses. Goldberg et al. (2007) found that individuals with mental illness received fewer services and less education regarding diabetes from health care providers than those without mental illness. As well, Sullivan et al. (2006) state that individuals with diabetes and mental illness were significantly less likely to be hospitalized for diabetes after presenting in the emergency department than were those without mental illness. For patients with schizophrenia, El-Mallakh (2007) found that the social and economic consequences of their mental illness interfered with the ability to access the resources for adequate diabetic self-care. In addition, the coexistence of diabetes and depression is associated with significantly increased health costs (Egede & Ellis, 2010; and Katon, 2008).

Education for Individuals with Diabetes and Mental Illness

It is clear from previous research that there is a strong link between diabetes and mental illness and that medical care and medication adherence are lower for individuals with these comorbid

disorders. For these reasons, support is needed to help individuals with diabetes and mental illness manage their health and lifestyle choices. Supporting people living with diabetes to manage their own illness and improve their health is one of the key features of chronic disease prevention and management (Wagner et al. 1996). Self-management support goes beyond education to providing people with the skills, tools and confidence they need to take control of their illness and make positive changes in their lives. For example, Jackson et al. (2007) suggest that mental health care workers should consider educating and supporting patients in order to prevent diabetes and to manage weight gain.

Peer Support for Diabetes and Mental Illness

People with mental illness often experience stigma in the health system (Canadian Alliance on Mental Illness and Mental Health, 2007). Support from others who have similar life experience is often welcomed. Peer mentors are people who have experienced the same challenges as the people they are supporting. Studies have found that peer mentoring improves coping skills and health outcomes for people with cancer, women experiencing postpartum depression, and HIV/AIDS patients, as well as improved self-care in heart-failure patients. Training of peer mentors focuses on communication skills, including empathic listening, supporting people to clarify their values and goals in life, problem solving, and assertiveness (Heisler, 2007). A more formal model of unstructured peer support is provided by people who come from the same cultural group but may not have experienced the same illness (e.g., diabetes). This type of peer support often includes helping people to access the resources they need, educating them about the illness and self-care, supporting them to develop the skills to manage the illness, providing social support, and liaising with the health care system. They have been shown to be particularly

helpful with vulnerable populations. By developing close, trusting relationships with the people they serve, they improve their quality of life, providing encouragement, education, connections to health and community resources, overcoming barriers such as lack of transportation and unstable work or home situations.

Randomized controlled trials and “real-life” evaluations have shown that peer support contributes to improved diabetes self- management, including medication adherence, diet, exercise, and blood glucose monitoring (Heisler, 2007). The Chronic Disease Self-Management Program, developed by Stanford University, is one example. Largely taught by trained peers, the program focuses on problem-solving, decision-making and confidence-building. Randomized controlled trials and “real-world” evaluations of the program have attributed improved health outcomes and reduced visits to emergency rooms (Lorig et al. 2001).

Mental health peer support has been a long-established best practice recognized in Canada. In Ontario, consumer/survivor initiatives (CSIs) have been providing peer support to improve the quality of life for people with lived experience of mental illness since 1991. CSIs are provincially funded organizations run by and for consumer/survivors. The experiential knowledge of peer support workers has implications beyond mental health self-care. Mental health peer support workers are in an ideal position to support their peers to understand their risk of, learn and practice prevention strategies against, and to self-manage, diabetes.

Current Project

The goal of the current project was to increase the skills of mental health peer support workers in providing support for the prevention and self-management of diabetes in the high-risk population of people living with a serious mental illness and to increase awareness in the diabetes

community of the role mental health support workers can play in prevention and self-management support. The project also educated the diabetes sector about the existing mental health peer support resources and infrastructure (CSIs) in Ontario that can be mobilized to address diabetes. To accomplish this, a diabetes peer support training module was developed. The diabetes training module was pilot tested by peer support trainers affiliated with OPDI member CSIs within regions across Ontario. An evaluation was conducted by Dr. Cheryl Forchuk and Amanda Meier of Lawson Health Research Institute in London, Ontario. The diabetes training module can then be revised and distributed provincially based on the findings from this evaluation.

Methodology

Setting

As of July 2011, Ontario has a population of 13,372,996 spread out over 917,741 square kilometres (Ministry of Finance Ontario, 2012). The Ontario Peer Development Initiative (OPDI) is the provincial organization funded by the Ontario Ministry of Health and Long-Term Care as the provincial voice for consumer/survivor initiatives (CSIs). Eight OPDI CSIs across Ontario were selected as part of the diabetes module training program. This included Brantford, London, North Bay, Thunder Bay, Smith Falls, Toronto, Oshawa and Penetanguishene.

Sample

There were two groups of participants in this study: 1) Module trainers and 2) Trained peer support workers.

Module Trainers

Eight individuals, representing the eight regions across Ontario described above were trained as module trainers for this project (i.e., completed the “train the trainer” module). This training involved both theory and practice during a two-day training session. Module trainers received diabetes education (understanding the illness, risk factors as they related to people with mental illness, and how individuals can prevent and manage the illness) and information around the diabetes care system. They had the opportunity to discuss with a diabetes educator the challenges of preventing and managing diabetes when living with mental illness and the challenges of dealing with the physical health care sector. They also had the opportunity to offer practice training sessions with each other and to get feedback on their performance. When this training was completed, the module trainers returned to their regions and offered training in peer support delivery to the OPDI/CSI members in their regions.

Trained Peer Support Workers

Eighty peer support workers at the various regional CSIs participated in half-day training sessions (i.e., completed the “regional training session” module) administered by the module trainers in their region and a diabetes educator. This training included diabetes education and information around the diabetes care system. The trained peer support workers then received support from the module trainer and diabetes educator via group and individual e-mail correspondence, teleconferences, and where possible, face-to-face sessions.

The objective for the trained peer support workers was to provide diabetes support as part of their existing work at their local CSI. Diabetes support ranged from one-on-one peer support to running a diabetes education program or support group. The trained peer support workers

could work in a variety of ways so there was room for creativity, initiative and different types of integrated approaches.

Evaluation Procedure

The training modules were evaluated using a number of different methods.

“Train the Trainer” Module

The “train the trainer” module was evaluated by conducting a 30-minute one-on-one telephone interview with seven (out of eight) module trainers one month following the training module.

The interview included questions about diabetes knowledge (e.g., “Describe your current understanding of the risk factors related to diabetes for people living with serious mental illness”), learning needs (e.g., “In order to confidently step into your role as trainer what do you identify as your key learning need?”), and recommendations for future modules (e.g., “What topics about diabetes do you suggest be included in the training module?”). The telephone interviews were audio-recorded and transcribed by research staff to ensure accuracy during analysis.

“Regional Training Sessions” Module

The “regional training sessions” were evaluated using three methods over a one-year period allowing for both quantitative and qualitative analysis.

Diabetes Knowledge Test

Of the 80 peer support workers who attended the “regional training session” module, 63 completed a Diabetes Knowledge Test immediately prior to participating in the training module and immediately following the training module. The Diabetes Knowledge Test included questions pertaining to the most common symptoms of diabetes, what normal fasting blood sugar should be, the purpose of insulin, the importance of exercise, and risk factors for diabetes. Questions specific to peer support were also included in order to gain insight into the participants’ comfort with providing peer support on the topic of diabetes and mental illness (e.g., “I feel confident in my ability to provide peer support for a peer who is living with diabetes”; participants could select any of the following responses: strongly agree, agree, unsure, disagree, strongly disagree). Tests completed pre-training were compared to those completed post-training to determine the effectiveness of the training module in increasing diabetes knowledge and comfort/confidence in providing peer support.

Regional Focus Groups

Six months following the “regional training session” modules, the trained peer support workers were invited to participate in focus groups within their regions. The focus groups were completed in person, in group sessions, within each participating CSI. The focus groups met from 1.5 to 2 hours each, were audio-recorded and transcribed verbatim by research staff. A facilitator traveled to each regional CSI to facilitate the focus groups with 2 research assistants who took notes of discussions and non-verbal communication to be integrated into the transcripts to ensure that complete analysis of the groups was possible. A total of 46 trained peer support workers participated in the focus groups. Focus group questions included: “What was the most

important thing you learned from the training module,” “In what ways have you used what you learned during the training in your role as a peer support worker?,” “Reflecting back on the training, what should remain the same/what could be improved?” and “In what ways do you intend to use what you learned in your role as peer support worker in the future?” The facilitator ensured that all of the key information was covered during the focus groups but the exact conversations followed a course determined by the participants.

Online Follow-Up Survey

The trained peer support workers were invited to participate in an online follow-up survey one year following the “regional training session” modules. The purpose of this survey was to receive feedback from the trained peer support workers as to what (if any) supported them in the year following the training and also what (if any) hindered their ability to provide peer support for individuals living with diabetes and mental illness. The survey also included final questions pertaining to recommendations for future training modules. A total of 31 trained peer support workers completed the one-year follow-up survey.

Receiving feedback from the trained peer support workers immediately following training, 6-months post-training and 1-year post-training were important to determine how perceptions of the training may have changed over time, if the knowledge/benefits of the training persisted over time and what recommendations the trained peer support workers had as they had more time and opportunities to use the knowledge gained during the training.

Results

“Train the Trainer” Module

Diabetes Knowledge

During the telephone interview the module trainers were asked to rate their current understanding of diabetes (low, medium, high) and to explain their current level of understanding. Three participants (42.9%) believed they had a high level of understanding of diabetes, 3 participants (42.9%) believed they had a medium level of understanding of diabetes, and one participant (14.3%) believed he/she had a low level of understanding of diabetes. All 3 of the individuals who reported high level of understanding had diabetes themselves and listed their personal experience as a reason for their high level of knowledge.

Participants were also asked to rate their current understanding of risk factors of diabetes (3 reported high, 3 reported medium, 1 reported low), their current understanding of self-management and prevention strategies (2 reported high, 4 reported medium, 1 reported low), and their current understanding of services within their region (3 reported high, 3 reported medium, 1 reported low). Results for each question were very similar as 6 out of 7 participants (85.7%) saw themselves as having medium to high understanding of the various diabetes knowledge questions. These results are promising but still reflect a need for further education as some participants felt they had low knowledge in specific areas of diabetes knowledge (note: one participant did not select “low” as his/her answer to every question; different participants selected “low” as their answer to various questions, totaling 1 “low” response for each question).

In addition to rating their current understanding of various areas of diabetes knowledge, participants were asked how they had learned about diabetes to date. The most common response

was that they learned about diabetes through personal experience and/or had family members with diabetes (5 participants reported these reasons). Other common ways of learning about diabetes were through family doctors, nurses, health educators, brochures and training sessions through various organizations. One participant had not learned anything about diabetes prior to participating in this project. Results indicate that the majority of module trainers had first-hand experiences with diabetes and therefore had prior knowledge of the illness but one participant had no prior knowledge.

Feedback on the “Train the Trainer” Module

In general, feedback for the “train the trainer” module was very positive. Participants believed that the “train the trainer” module covered important information about both diabetes and the role of peer support. One participant stated: “I like the way it’s [the training module] written. I like the way that it’s presented, because we are not clinicians, and however, we can offer peer support, by being knowledgeable. I like the way that whole segment is written and offered.” Another participant said: “I believe they’ve done a very good job of actually putting in there what’s needed to help.” This positive feedback demonstrates that participants appreciated the training and gained valuable knowledge from it.

Throughout the interview participants also gave feedback on items they believed to be missing from the training module or should have been addressed in further depth. Two common topics emerged from their responses. First, participants discussed that they would have liked to receive more education on core diabetes information early in the “train the trainer” module (e.g., more information on causes of diabetes, risk factors, and symptoms). One participant stated that the information on the actual research project could have been shortened in order to have “more

time spent on really understanding diabetes a little bit more, because even if we are not going to be the expert about it, you do have to have some knowledge about it to help people.” Second, participants provided feedback that they would have liked to spend more time practicing group facilitation (e.g., “You [the developers] might want to include [an] additional part where people have an opportunity to practice ... facilitating a piece of the diabetes training in front of their peers and getting some feedback on that”). Both core diabetes knowledge and practice for group facilitation did not receive as much attention in the training as the module trainers would have liked.

In addition to providing general feedback, participants were specifically asked for suggestions for topics to be included in future training modules. Some common ideas and themes emerged from these questions. The most common suggestion for future modules was to provide more information on self-management and how to deal with the illnesses in day-to-day life (e.g., “The issue isn’t always lack of knowledge but what you should do. For many people with mental illness it’s being able to get your life under control so you can comply”). A second common suggestion was to discuss the emotions associated with diagnosis and the grieving process that individuals go through. One participant described it as “coming to terms with the anger, the frustration, the sense of hopelessness.” Other suggestions included education on services available in each community, risk management and early detection of diabetes, and how to help individuals with diabetes and mental illness self-advocate. Participants believed that these suggestions would increase their ability to support individuals in their CSIs.

During the interviews the module trainers were also given the opportunity to discuss the ways in which they planned to use the knowledge gained through diabetes training in their regional CSIs. A very common response was the plan to help develop and run healthy eating

groups. This ranged from formal cooking classes to installing a healthy food box for people to obtain healthy snacks. There were three other main ideas in which the module trainers were going to use their knowledge: 1) to develop walking groups and light exercise groups, 2) to provide one-on-one peer support to individuals who may not be ready to seek help from health care professionals (e.g., “we can do some one-on-ones to help people get on track enough so that they feel comfortable enough going to a diabetes professional ... a lot of our people are so far off of what they should be doing that they are embarrassed to go see a dietician”), and 3) to help individuals develop a Wellness Recovery Action Plan (WRAP) specifically around how to live with diabetes. As healthy eating, exercise, one-on-one support and WRAPs play a large role in wellness for individuals with diabetes and mental illness, these are very promising plans for the module trainers to implement in their CSIs because of the training module.

“Regional Training Session” Module

Diabetes Knowledge

A total of 63 trained peer support workers completed the Diabetes Knowledge Test immediately prior to the training module and immediately following the training module. It can therefore be assumed that any changes in responses were due to information obtained during the training module. A complete location breakdown of participants can be found in Table 1. The number of responses varied for individual questions as some participants skipped questions. The full results, including missing data points, are summarized in Appendix A.

Table 1. Diabetes Knowledge Test: Location of Respondents

	Frequency	Percent
Brantford	10	15.9
London	14	22.2
North Bay	10	15.9
Oshawa	4	6.3
Penetanguishene	9	14.3
Smith Falls	3	4.8
Thunder Bay	4	6.3
Toronto	9	14.3
Total	63	100.0

The first section of the Diabetes Knowledge Test contained 10 questions; 5 of which pertained to “core diabetes knowledge” and 5 of which pertained to “lifestyle” questions for individuals with diabetes (i.e., questions about exercise and nutrition). The second section of the Diabetes Knowledge Test contained 15 True/False statements about other diabetes knowledge (e.g., diabetes pills, related illnesses).

Core Diabetes Knowledge

The first core diabetes question asked for the definition of diabetes. In the pre-test, 42 participants (70.0%) chose the correct answer (“is a condition in which the body cannot use food properly”). In the post-test, the percent of correct answers rose to 78.7%. However, 11.5% of participants still responded incorrectly with “is caused by eating too much sugar and sweet foods” and 9.8% responded incorrectly with “results when kidneys cannot control sugar in urine.”

The second question asked for the most common symptoms of diabetes. In the pre-test, 56 (91.8%) of participants responded correctly with the symptoms being “frequent urination,

hunger, thirst.” In the post-test, 100.0% of participants responded correctly. It appears that the training was very successful in teaching participants about the symptoms of diabetes.

The third question asked for the normal fasting blood sugar level. In the pre-test, 42 (70.0%) participants chose the correct answer (“3.6-6.1 mmol/L”). In the post-test, this number only rose to 45 participants (72.6%). Nine participants (14.5%) incorrectly selected “2.2-3.9 mmol/L” and 8 participants (12.9%) incorrectly selected “6.4-8.9 mmol/L.”

The fourth question asked for the purpose of oral diabetes medication (pills for diabetes). In the pre-test, participants were very unsure of the correct answer with 26 (41.9%) choosing “are insulin taken in pill form” and 33 (53.2%) choosing “can lower blood sugar.” In the post-test, participants were more consistent in giving the correct answer with 50 (80.6%) choosing “can lower blood sugar.”

The final core knowledge question asked for the definition of insulin. In the pre-test, only 32 (50.8%) responded correctly (“helps the body use food properly by letting sugar enter cell”). A common incorrect answer in the pre-test was “keeps the blood sugar level constant all day” with 25 participants (39.7%) selecting this response. In the post-test, the percent of correct responses rose to 75.4%; there was marked improvement in participants’ understanding of insulin.

The results from the core diabetes knowledge questions indicated that the training module was effective in increasing core diabetes knowledge for participants. When taking the mean number of correct answers pre-test ($M = 3.25$, $SD = 1.32$) and the mean number of correct answers post-test ($M = 3.95$, $SD = 1.21$), we found that there was significant improvement from pre- to post-test on core diabetes knowledge, $t(62) = -4.34$, $p < .000$. While there was significant improvement after training, there are still some topics that could be discussed in more depth in

the future to further improve participant knowledge. For example, only 72.6% of participants knew what normal fasting blood sugar levels were after training and only 75.4% knew the definition of insulin after training. These results coincide with the comments and responses from participants that more time should be spent on reviewing core knowledge.

Lifestyle Knowledge

The first lifestyle question (question 6 of test) asked for the benefits of having a regular exercise program. In the pre-test, 55 participants (90.2%) chose the correct answer (“can help control blood sugar and lower blood pressure and cholesterol”) and rose to 93.2% in the post-test. It appears that the majority of participants were aware of the benefits of exercise prior to training.

The second lifestyle question (question 7 of test) asked what is needed in a diabetes meal plan. In the pre-test, 57 participants (90.5%) chose the correct answer (“must be individualized to meet your needs”) and this percent increased to 100.0% in the post-test.

The third lifestyle question (question 8 of test) asked why foods high in saturated fats and cholesterol should be limited. In the pre-test, 50 participants (83.3%) chose the correct answer (“lower your blood sugar level and cut down your chance of getting heart disease”). Nine participants (15.0%) simply selected “I don’t know.” In the post-test, all 60 participants (100.0%) answered correctly. It appears that the training helped clarify why foods high in saturated fats and cholesterol should be limited.

The fourth lifestyle question (question 9 of test) asked what the best choice of food is for a person taking daily insulin who is sick. In the pre-test, 52 participants (88.1%) chose the

correct answer (“soup and apple sauce”) and this number increased to 60 participants (98.4%) in the post-test. Only one participant chose the incorrect response in the post-test.

The final lifestyle question (question 10 of test) asked participants to choose the correct statement for individuals with diabetes. The correct answer was “changes in lifestyle can help manage diabetes successfully” and the incorrect answer was “everyone with diabetes should have between-meal snacks.” Fifty-three participants (86.9%) chose the correct answer in the pre-test with the number rising to 59 participants (98.3%) in the post-test.

The results from the lifestyle questions indicated that participants had a great deal of knowledge around exercise and nutrition prior to training but this knowledge was further increased during training. When taking the mean number of correct answers pre-test ($M = 4.24$, $SD = 0.95$) and the mean number of correct answers post-test ($M = 4.68$, $SD = 0.90$), we found that there was significant improvement from pre- to post-test in diabetes lifestyle knowledge, $t(62) = -3.04$, $p < .01$.

General Knowledge: Other Issues Related to Diabetes

The first and second true/false items (questions 11 and 12 of test) contained information about diabetes pills. The first item stated: “It is not necessary to control the amount of food when taking diabetes pills.” In the pre-test, 59 participants (93.7%) answered correctly with “False.” In the post-test, the correct response increased to 98.4%. While participants were generally aware of this answer prior to training, the training increased accuracy by 4.7%. The second item stated: “Certain diabetes pills can help you lose weight.” This question had the most drastic change between pre- and post-test. In the pre-test, only 13 participants (21.0%) responded correctly with

“True.” However, in the post-test the number of correct responses increased to 58 (95.1%). The training module was very effective in teaching participants about diabetes pills.

The third and fourth items (questions 13 and 14 of test) contained statements about exercise. The third item stated: “In most cases, exercise will lower blood sugar level.” In the pre-test, 52 participants (85.3%) answered correctly with “True.” In the post-test, 58 participants (95.1%) answered correctly. The fourth item stated: “The effects of exercise can last a long time after stopping.” In the pre-test, 44 participants (69.8%) answered correctly with “True.” In the post-test, the correct answer increased to 57 participants (93.4%).

Items 5, 6 and 8 (questions 15, 16 and 18 in test) contained information on meal plans. Item 5 stated: “Meals should be evenly spaced throughout the day.” Prior to training, 53 participants (84.1%) answered correctly with “True.” After training, this number increased to 59 participants (96.7%). Item 6 stated: “The diabetes meal plan needs to be modified from time to time, due to changes in lifestyle.” In the pre-test, 59 participants (93.7%) responded correctly with “True.” The number of correct responses remained at 59 in the post-test. Item 8 stated: “Many people with Type 2 diabetes can maintain good blood sugar control by following a proper meal plan without taking medication.” In the pre-test, 45 participants (71.4%) answered correctly with “True.” In the post-test, this number increased to 58 participants (93.6%). It appears that the training was very effective in teaching participants the importance of proper meal planning.

The seventh item (question 17 in test) discussed sugar substitutes. It stated: “People with diabetes are allowed to use as much sugar substitutes as they want.” In the pre-test, 53 participants (85.5%) responded correctly with “False.” In the post-test, the number of correct answers decreased to 50 participants (80.7%). The topic of sugar substitutes may be something

that needs further explanation in future modules as there was less consistency of responses for this question.

The ninth item (question 19 in test) stated: “Food, exercise, diabetes medication and stress can affect blood sugar level.” In the pre-test, 62 participants (98.4%) responded correctly with “True.” This response remained at 98.4% for the post-test.

The tenth item (question 20 in test) stated: “Glycosylated hemoglobin is a blood test that shows the average level of fat in the blood during the past 8-12 weeks.” In the pre-test, 44 participants (71.0%) responded correctly with “True.” In the post-test, this number increased to 50 participants (80.7%). There is still room for improvement when covering this topic in the future.

Item 11 (question 21 in test) stated: “The chance of getting Type 2 diabetes is greater if a blood relative has diabetes.” In the pre-test, 56 participants (90.3%) answered correctly with “True.” The number of correct responses remained the same in the post-test.

Item 12 (question 22 in test) stated: “A person with diabetes may often have feelings of fear, anxiety, denial, frustration, resentment or anger.” In the pre-test, 55 participants (87.3%) responded correctly with “True.” The correct response increased to 60 participants (96.7%) in the post-test. The training was beneficial in teaching participants the emotions that diabetes can evoke.

The final items in this section (questions 23-25 in test) contained information about other health concerns that relate to diabetes and all of the statements were “True.” Item 13 stated: “A person with diabetes has a greater chance of heart attack, stroke, blindness or kidney disease than a person without diabetes.” In the pre-test, 60 participants (95.2%) responded correctly. The

number of correct responses remained the same in the post-test. Item 14 stated: “Taking good care of your feet will guard against infection, injury and other problems related to poor circulation and nerve damage.” In the pre-test, 58 participants (95.1%) answered correctly and this percentage rose to 100.0% in the post-test. Item 15 stated: “When a person’s blood sugar is out of control (high), there is a greater chance of infection and illness.” In the pre-test, 61 participants (96.8%) responded correctly and this percentage rose to 100.0% in the post-test. It appears that participants were well-informed about other health issues related to diabetes prior to training and training was effective in reducing any incorrect information.

Peer Support

In addition to testing the participants on their understanding of diabetes and living with diabetes, the Diabetes Knowledge Test included questions pertaining to peer support. More specifically, the questions aimed to gain greater understanding of the participants’ comfort and confidence in becoming trained peer support workers for individuals with diabetes and mental illness. This section was divided into two questions.

The first question listed 4 statements about peer support and participants were given the opportunity to select whether they “strongly agreed,” “agreed,” “unsure,” “disagreed,” or “strongly disagreed” with each statement. The first statement said: “I have the knowledge I need to provide peer support with a peer who is living with diabetes.” Prior the diabetes training module, only 26.7% of participants agreed or strongly agreed with this statement. After participants completed the training module, the percent who agreed/strongly agreed rose to 90.2%. The second statement said: “I know where to find a diabetes expert who can educate peers about diabetes.” Prior to training, 67.2% of the participants believed they knew where to

find a diabetes expert. After training, 98.7% felt they knew where to find a diabetes expert. The third statement said: “I feel confident in my ability to provide peer support for a peer who is living with diabetes.” Prior to training, 37.7% were unsure about their ability to provide peer support and 26.4% did not believe they were able to provide peer support. After training, only 8.2% were unsure and 3.3% did not believe they were able to provide peer support. 88.6% were confident in their ability to provide peer support after training. The final statement said: “I feel comfortable raising awareness of the risk of developing diabetes with peers.” Prior to training, 67.3% of participants were comfortable raising awareness of risk factors and this percentage rose to 93.3% after training. From these results it can be seen that the training module was very effective in increasing participants’ knowledge, confidence and comfort in providing peer support to individuals with diabetes and mental illness.

The second peer support question stated a number of ways in which a peer supporter can best help a peer living with diabetes. There were 10 different ways in which a peer supporter could potentially help a peer and participants had to select whether they “strongly agreed,” “agreed,” “unsure,” “disagreed,” or “strongly disagreed” that they could help in each way.

Prior to training, participants believed that the best way to help a peer was by “acknowledging a person’s challenges and concerns related to diabetes and mental health” (52.5% strongly agreed), followed by “appreciating the burden of a person’s diabetes and mental health self-management” (47.5% strongly agreed), by “promoting self-advocacy” (47.5% strongly agreed), and by “introducing a person to a diabetes educator” (44.3% strongly agreed). In contrast, only 13.1% believed that “speaking to a physician on behalf of a person about their diabetes” was the best way to provide peer support. Participants did not think “identifying

natural supplements for diabetes control,” “designing an exercise program for a person” or “explaining the meaning of a person’s blood sugar levels” were a good way to help a peer either.

After training, participants still believed that the best way to help a peer was by “acknowledging a person’s challenges and concerns related to diabetes and mental health” (63.3% strongly agreed). Throughout the training, participants learned that “promoting self-advocacy” can also be the best way to provide help to a peer (63.3% strongly agreed). The issue of helping someone understand the grieving process in relation to diabetes was not particularly strong in the pre-test but came across as a very important role for peer supporters in the post-test (61.7% strongly agreed). Some of the ways participants did not believe they should help was by “identifying natural supplements for diabetes control” (only 3.4% strongly agreed), by “designing an exercise program for a person” (only 9.8% strongly agreed) or by “speaking to a physician on behalf of a person about their diabetes” (only 13.3% strongly agreed).

It appears that the training module effectively outlined the importance of peer support for helping individuals with self-advocacy and dealing with emotional responses, including the grieving process. Most participants understood prior to training that their role is not to intervene with physicians, develop exercise programs or suggest nutritional supplements and the training module further emphasized those points.

Feedback from the “Regional Training Session” Module

Focus Group Feedback (6-months post-training)

The trained peer support workers were invited to participate in focus groups 6-months post-training. A total of 46 trained peer support workers attended; they were given the opportunity to

provide feedback on the training module and discuss how they had used and plan to use the training in their local CSIs. A complete breakdown of participant location can be found in Table 2.

Table 2. Focus Groups: Location of Participants

	Frequency	Percent
Brantford	7	15.2
London	7	15.2
North Bay	9	19.6
Oshawa	3	6.5
Penetanguishene	5	10.9
Smith Falls	3	6.5
Thunder Bay	2	4.4
Toronto	10	21.7
Total	46	100.0

During the focus groups, the trained peer support workers were asked to discuss the most important thing they learned from the “regional training session” module. When reviewing all of the focus group transcripts, two main themes emerged from this question. The most common thing participants discussed was an increased knowledge about diabetes (discussed in 7/8 groups). More specifically, participants expressed that the most important thing they obtained was an increased knowledge of what a diagnosis of diabetes means for individuals with mental illnesses (i.e., “basically the awareness of the problems of diabetes surrounding people that live with mental illnesses”). Second, the trained peer support workers viewed learning about the emotions related to diabetes (e.g., grief, anger, stress) as one of the most important things they learned from the training module. One participant explained, “I guess you just think it’s automatically all okay ... I didn’t really think ... about ... the effects that the chronic illness has on people.” Another participant said, “It really has never occurred to me before, just how

stressful each and every morning might be.” The emotions related to a diagnosis of diabetes and living with comorbid disorders was a very important part of training for participants. Other important things participants learned during training included the importance of healthy eating and exercise, the importance of self-care and self-empowerment, and the role of peer support workers when dealing with diabetes and mental illness.

Some important information obtained during the focus groups was what the participants believed should remain the same in the training module and also what improvements would be needed for future modules. Feedback was generally positive for the training module; some comments included: “I think it was very well done, I learned a lot,” “It was broken down very good, the stages, I thought ... it was very easy to understand,” and “we got a lot of questions answered.” Participants thought that a number of things about the training module should remain the same, including: a core knowledge portion at the beginning of training, the peer statements and lived experience components (described as “very inspirational”), learning about the emotional aspects/grieving process of the diagnosis, having a diabetes educator present, small group sizes, the materials provided (CDs, pamphlets), keeping the day interactive, and reinforcing the difference between being diabetes informed and being a diabetes expert (e.g., “The thing that stood out for me was ... we don’t have to be the diabetes expert, we are not supposed to be the diabetes expert”). Results indicate that participants viewed the training module very positively and listed a number of ways in which it should remain the same.

When asked the ways in which the training module could improve, participants had a number of suggestions to further improve the training module. The most common suggestion for improvement was to make the training longer; the suggestion by the majority of participants was to make the training two days. Participants felt that they needed more time to “absorb the

information” and the extra day would give more opportunities for some of the other activities that were suggested. Some of the other activities included: more time spent on core diabetes knowledge, including video clips of situations that people may encounter with a “what would you do” component, more role-playing and practice in peer support scenarios, teaching ways in which people can initiate peer support without appearing intrusive, and having other professionals/key stakeholders attend to discuss the situation from their perspective. In addition to expanding certain sections of the training and adding completely new activities (e.g., the video clips), participants expressed a desire for additional resources to be provided at the training. These resource suggestions included: tip sheets on the mechanisms of diabetes, handouts on better nutrition for people living on a fixed income, and pamphlets with specific resources in each community. Results indicate that the participants appreciated all of the information that was included in the training module but desired additional activities and resources to further education and comfort with the topic.

The trained peer support workers were then given the opportunity to describe the ways in which they had used the knowledge they learned in training in their local CSIs (in the 6 months post-training). The most common way in which participants used the training was to encourage individuals at their CSIs to eat healthier and exercise regularly. While providing support for an individual, one participant explained “I said just cut back on what you eat because she would go out and have a sandwich and two muffins and for her that’s okay ... you wanna live healthy if you wanna be around for your grandchildren.” Another way in which participants used the training was to start support groups for diabetes and mental health. One city developed a particularly interesting group which taught people about diabetes clinics and resources, how to use diabetes monitors, how to deal with a new diagnosis, made people aware of the importance

of physical activity and provided handouts explaining how to deal with different blood sugar levels. Other participants provided more one-on-one support to individuals in their CSIs. These participants described supporting individuals by encouraging them to “get checked regularly,” “giving them the support to make the changes,” and simply using the knowledge gained in training to “sit down with the individual and discuss the situation.”

There were some participants (4 participants from 4 different locations) who expressed that they had not used the information learned in training at their local CSIs. However, the only reason that the trained peer support workers did not use the information learned was because they had not had the opportunity to or they were not in a role to allow them to use it. For example, one participant explained: “I would have no way of knowing that [a client has diabetes] because its not my job to know that.” It is important to note that no one expressed that the training was inadequate to allow them to use the knowledge in their CSI. Limitations were based on roles and not on lack of comfort with the material.

Participants were also asked to brainstorm ways in which they may use the information learned from training in the future. Three ideas were frequently expressed within the groups. Developing healthy eating groups was by far the most popular idea across groups. The specific format envisioned by the groups differed but the main concept remained the same: teaching individuals how to eat healthier. Suggestions ranged from creating a community kitchen in CSIs, teaching cooking classes, lessons on proper grocery shopping (i.e., buying healthy on a budget), and meal planning. Two cities also planned to develop peer support groups for people with diabetes and two other cities planned to incorporate diabetes training into the existing educational programs at their CSIs. General impressions indicated that participants were eager to use the knowledge they learned during the training module to help others at their CSIs.

Online Survey Feedback (One-year post-training)

The trained peer support workers were invited to participate in an online survey one-year post-training for feedback on the training sessions and to gain insight into the ways in which they had been able to use their training over a one-year period at their regional CSIs. A total of 31 trained peer support workers completed the online survey. Location information was not asked during the online survey so a location breakdown for this component is not available. Four main questions were asked of the trained peer support workers in this survey.

First, the trained peer support workers were given an opportunity to describe what had supported them in using the information in the diabetes training in their role. At the time of the survey, 4 participants (12.9%) were not in roles that allowed them to utilize their training and therefore responded that nothing had supported them. The remaining 27 participants (87.1%) had used the training and listed a variety of ways in which the training had supported them in their role. For example, resources obtained from the training were a large source of support (CDs, literature, project newsletter). The other main source of support listed was the increased awareness and understanding about diabetes from the training that allowed the peer support workers to effectively help people in their local CSIs. One participant wrote that training helped him/her “know the role that diabetes has in one’s life and the knowledge that there can be a change with support.” Another explained that the training increased his/her “understanding of the grief issues peers may be dealing with.” The majority of the trained peer support workers were in roles that allowed them to utilize their training one year following the training and the most important supports they drew from the training were the physical resources provided and the

raised awareness and understanding of various aspects of diabetes and how to provide support to their peers.

The trained peer support workers were also asked to describe what had hindered them from using the information from the diabetes training in their role. The most common hindrance for the peer support workers were time and work constraints that prevented them from using the information and skills they learned in training. Nine participants (29.0%) described this as a hindrance for them. For example, one participant explained that “being in a demanding employment role that does not involve formalized peer support” hindered him/her from using the information gained in training. The following are other hindrances listed by participants: 4 participants (12.9%) believed that they still lacked core knowledge because they had difficulty remembering the information they learned; 2 participants (6.5%) believed that they were hindered by clients who were unwilling to take their advice; and 2 participants (6.5%) believed that they were hindered by the bad lifestyle they lived personally (i.e., did not eat properly, exercise enough). While there were a number of different hindrances for the trained peer support workers, none of them reflected the training module itself; it appeared that majority of reasons reflected issues and situations in their own places of employment and personal lives instead of issues with the training itself. On another positive note, 7 participants (22.6%) responded that they had faced no hindrances at all. One participant noted: “I feel very comfortable with what I learned.” These results indicate that the trained peer support workers may require additional support once the training is complete (to address issues of forgetting information and bad lifestyle choices) but there was not a great deal of limitation caused by the training itself.

There was a great deal of consistency among responses when participants were asked what further supports they needed so they could effectively use the information from the diabetes

training in their roles. The majority of respondents believed continued education/training (7 participants, 22.6%) and updated materials (6 participants, 19.4%) were most important for sustained support. Other suggestions included having the opportunity to share positive experiences with other trained peer support workers and providing more role-playing opportunities (for difficult situations in particular). Three participants (9.7%) believed that no further supports were required. Results suggest that trained peer support workers would benefit from refresher courses that include updated information and more interaction with peers to better prepare them for situations they may encounter at their CSIs.

Finally, when asked what changes should be made to the training module a common response was to include refresher sessions and to make the training longer (also a common response among focus group participants). Participants did not think the content of the training should change but that it should be spread out to allow more time for interaction and practice among the group. For example, one participant said there should have been time for “practice on how to carry out a group and not just practice with one on one individuals.” Another participant wanted “more peer support and discussion, talking about different coping skills.” In general, the results were very positive as 7 participants (22.6%) did not believe any changes were needed and the remaining participants wanted more training and more time for practice in order to further enhance their skills as peer support workers.

Discussion

In general, this project has educated and informed many peer support workers (both module trainers and trained peer support workers) of the relationship between diabetes and mental health and how to effectively act as a peer supporter for individuals dealing with these illnesses. Both the “train the trainer” module and the “regional training session” module were viewed positively

by peer support workers and knowledge gained from these modules was implemented in 8 CSIs across Ontario. The participants in this project provided valuable feedback to the researchers on the ways in which the modules can be improved for future use, including activities that were vital and should remain the same as well as new suggestions for activities to be included. The following are a number of recommendations for each module based on results from this evaluation.

Recommendations

“Train the Trainer” Module

Results from the telephone interview indicated that the majority of module trainers felt that they had “medium” to “high” knowledge in a number of diabetes areas but some participants felt they had “low” knowledge for certain topics. It is recommended that the “train the trainer” module include more information on core diabetes knowledge. Because the module trainers are responsible for facilitating the “regional training session” modules it is vital that they have, at minimum, medium (but preferably high) levels of knowledge of diabetes so they can effectively inform others during the “regional training session” modules. One module trainer also expressed that he/she had no prior knowledge of diabetes before the “train the trainer” module so the training must be broad enough to educate those with no experience and also further the knowledge of those who already possess information about diabetes.

Based on the feedback from the module trainers it is also recommended that more time during the “train the trainer” module be set aside for practice on group facilitation. Again, the module trainers will be responsible for facilitating the “regional training session” modules and it is therefore extremely important that they are comfortable and confident with group facilitation.

Including in-depth practice sessions would allow for the module trainers to provide feedback for one another and increase their own self-awareness for facilitating at the same time.

“Regional Training Session” Module

The trained peer support workers provided a great deal of valuable feedback on the “regional training session” modules. Based on their feedback and the results from the Diabetes Knowledge Test it is recommended that additional time be spent on core diabetes knowledge at the beginning of the training module. While participants had a significant increase in core knowledge results after the training module, some questions still had enough incorrect responses to need further explanation. The trained peer support workers echoed these results in the focus groups by expressing their desire for more core diabetes training to increase their confidence when speaking to individuals at their CSIs.

A second recommendation is for additional time to be spent allowing the trained peer support workers to interact with one another in role-playing scenarios. Role-playing can give participants more comfort and confidence with both diabetes information and approaching peers to discuss diabetes. This may also address the concern expressed in the online follow-up survey that individuals at their CSIs were not interested in taking their advice. If the trained peer support workers practiced with one another they may be more confident when approaching peers at their local CSIs, therefore making the peers more comfortable speaking with them.

The trained peer support workers were also consistent in their desire for longer training sessions (suggestion of two days). It is recommended, if time and finances allow, that the training be expanded by a minimum of half a day to allow for additional education on core knowledge and additional time spent for interactive training (i.e., role playing, practice approaching peers, etc.). The most common critique by participants was not issues with the

content itself but that they would like additional time to spend absorbing the content and practice to gain better understanding and confidence.

In addition, it is recommended that the developers create and provide additional resources to participants (both module trainers and trained peer support workers). Examples of additional resources are tip sheets on the mechanisms of diabetes, handouts on better nutrition for people living on a fixed income, and pamphlets with specific resources in each community. The tip sheets could be particularly useful to address the concern by participants in the online follow-up survey that they had forgotten some of the core diabetes knowledge one-year post-training.

A final recommendation is for additional follow-up activities to be arranged for participants. Numerous participants expressed the desire for refresher courses on the topic and updated materials to be distributed. This could be an effective way to keep peer support workers engaged on the topic so that they continue to utilize the knowledge at their own CSIs.

Conclusions

Overall, the Diabetes and Mental Health training modules were very effective and enjoyed by the individuals who took part in them. Both the module trainers and trained peer support workers increased their knowledge of diabetes and mental health throughout the training sessions and took the information back to their CSIs to be used in a variety of ways. Feedback from participants was very beneficial in outlining the positives of the training module and also some areas of improvement for the future. The evaluation produced very positive results and indicated that participants are eager for more information and knowledge around this topic.

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Appendix A: Diabetes Knowledge Test Results

1. Diabetes mellitus is:

	PRE (n=60; 3 missing)		POST (n=61; 2 missing)	
	Frequency	Percent	Frequency	Percent
is caused by eating too much sugar and sweet foods	3	5.0	7	11.5
is a condition in which the body cannot use food properly	42	70.0	48	78.7
results when the kidney cannot control sugar in the urine	13	21.7	6	9.8
is caused by liver failure	2	3.3		

2. The most common symptoms of diabetes mellitus are:

	PRE (n=61; 2 missing)		POST (n=60; 3 missing)	
	Frequency	Percent	Frequency	Percent
frequent urination, hunger, thirst	56	91.8	60	100.0
craving for sweets	3	4.9		
sweaty, nervous	2	3.3		

3. The normal fasting blood sugar level is about:

	PRE (n=60; 3 missing)		POST (n=62; 1 missing)	
	Frequency	Percent	Frequency	Percent
2.2-3.9 mmol/L	6	10.0	9	14.5
3.6-6.1 mmol/L	42	70.0	45	72.6
6.4-8.9 mmol/L	12	20.0	8	12.9

4. Pills for diabetes (oral diabetes medication):

	PRE (n=62; 1 missing)		POST (n=62; 1 missing)	
	Frequency	Percent	Frequency	Percent
are insulin taken in pill form	26	41.9	10	16.1
can lower blood sugar	33	53.2	50	80.6
are given to anyone with diabetes	1	1.6	1	1.6
can be taken at any time of the day	2	3.2	1	1.6

5. Insulin:

	PRE (n=63)		POST (n=61; 2 missing)	
	Frequency	Percent	Frequency	Percent
keeps the blood sugar level constant all day	25	39.7	11	18.0
can be taken at any time of the day	3	4.8	1	1.6
helps the body use food properly by letting sugar enter cell	32	50.8	46	75.4
raises blood sugar level by keeping sugar in blood vessels	3	4.8	3	4.9

6. A regular exercise program:

	PRE (n=61; 2 missing)		POST (n=59; 4 missing)	
	Frequency	Percent	Frequency	Percent
can help lower blood sugar	4	6.6	4	6.8
can lower blood pressure and cholesterol level	1	1.6		
can help control blood sugar AND lower blood press, cholesterol	55	90.2	55	93.2
can help control blood sugar AND does not affect blood sugar level	1	1.6		

7. A diabetes meal plan:

	PRE (n=63)		POST (n=61; 2 missing)	
	Frequency	Percent	Frequency	Percent
must be individualized to meet your needs	57	90.5	61	100.0
is a diet that requires many special foods	4	6.3		
does not allow you to have any starches	2	3.2		

8. Foods high in saturated fats and cholesterol should be limited in order to:

	PRE (n=60; 3 missing)		POST (n=60; 3 missing)	
	Frequency	Percent	Frequency	Percent
lower your blood sugar level and cut down your chance of getting heart disease	50	83.3	60	100.0
lower your heart rate	1	1.7		
I don't know	9	15.0		

9. Which is the best choice of food to have for sick days for a person with diabetes who takes daily insulin?

	PRE (n=59; 4 missing)		POST (n=61; 2 missing)	
	Frequency	Percent	Frequency	Percent
diet soda and hot tea	3	5.1	1	1.6
soup and apple sauce	52	88.1	60	98.4
milkshake	2	3.4		
don't eat or drink anything except water	2	3.4		

10. Which of the following statements is correct for people with diabetes?

	PRE (n=61; 2 missing)		POST (n=60; 3 missing)	
	Frequency	Percent	Frequency	Percent
everyone with diabetes should have between-meal snacks	8	13.1	1	1.7
changes in lifestyle can help manage diabetes successfully	53	86.9	59	98.3

PRE Responses:

	TRUE		FALSE	
	Frequency	Percent	Frequency	Percent
11. It is not necessary to control the amount of food when taking diabetes pills. (n=63)	4	6.35	59	93.65
12. Certain diabetes pills can help you lose weight. (n=62; 1 missing)	13	20.97	49	79.03
13. In most cases, exercise will lower blood sugar level. (n=61; 2 missing)	52	85.25	9	14.75
14. The effects of exercise can last a long time after stopping. (n=63)	44	69.84	19	30.16
15. Meals should be evenly spaced throughout the day, eg. 4-5 hours apart. (n=63)	53	84.13	10	15.87
16. The diabetes meal plan needs to be modified from time to time, due to changes in lifestyle. (n=63)	59	93.65	4	6.35
17. People with diabetes are allowed to use as much sugar substitutes as they want. (n=62; 1 missing)	9	14.52	53	85.48
18. Many people with type 2 diabetes can maintain good blood sugar control by following a proper meal plan w/o taking medication. (n=63)	45	71.43	18	28.57
19. Food, exercise, diabetes medication and stress can affect blood sugar level. (n=63)	62	98.41	1	1.59
20. Glycosylated hemoglobin is a blood test that shows the average level of fat in the blood during the past 8-12 weeks. (n=62; 1 missing)	44	70.97	18	29.03
21. The chance of getting type 2 diabetes is greater if a blood relative has diabetes. (n=62; 1 missing)	56	90.32	6	9.68
22. A person with diabetes may often have feelings of fear, anxiety, denial, frustration, resentment or anger. (n=63)	55	87.30	8	12.70
23. A person with diabetes has a greater chance of heart attack, stroke, blindness or kidney disease than a person w/o diabetes. (n=63)	60	95.24	3	4.76
24. Taking good care of your feet will guard against infection, injury and other problems related to poor circulation and nerve damage. (n=61; 2 missing)	58	95.08	3	4.92
25. When a person's blood sugar is out of control (high), there is a greater chance of infection and illness. (n=63)	61	96.83	2	3.17

POST Responses:

	TRUE		FALSE	
	Frequency	Percent	Frequency	Percent
11. It is not necessary to control the amount of food when taking diabetes pills. (n=61; 2 missing)	1	1.64	60	98.36
12. Certain diabetes pills can help you lose weight. (n=61; 2 missing)	58	95.08	3	4.92
13. In most cases, exercise will lower blood sugar level. (n=61; 2 missing)	58	95.08	3	4.92
14. The effects of exercise can last a long time after stopping. (n=61; 2 missing)	57	93.44	4	6.56
15. Meals should be evenly spaced throughout the day, eg. 4-5 hours apart. (n=61; 2 missing)	59	96.72	2	3.28
16. The diabetes meal plan needs to be modified from time to time, due to changes in lifestyle. (n=61; 2 missing)	59	96.72	2	3.28
17. People with diabetes are allowed to use as much sugar substitutes as they want. (n=62; 1 missing)	12	19.35	50	80.65
18. Many people with type 2 diabetes can maintain good blood sugar control by following a proper meal plan w/o taking medication. (n=62; 1 missing)	58	93.55	4	6.45
19. Food, exercise, diabetes medication and stress can affect blood sugar level. (n=62; 1 missing)	61	98.39	1	1.61
20. Glycosylated hemoglobin is a blood test that shows the average level of fat in the blood during the past 8-12 weeks. (n=62; 1 missing)	50	80.65	12	19.35
21. The chance of getting type 2 diabetes is greater if a blood relative has diabetes. (n=61; 2 missing)	56	91.80	5	8.20
22. A person with diabetes may often have feelings of fear, anxiety, denial, frustration, resentment or anger. (n=62; 1 missing)	60	96.77	2	3.23
23. A person with diabetes has a greater chance of heart attack, stroke, blindness or kidney disease than a person w/o diabetes. (n=62; 1 missing)	60	96.77	2	3.23
24. Taking good care of your feet will guard against infection, injury and other problems related to poor circulation and nerve damage. (n=62; 1 missing)	62	100.00		
25. When a person's blood sugar is out of control (high), there is a greater chance of infection and illness. (n=62; 1 missing)	62	100.00		

(1)a. I have the knowledge I need to provide peer support with a peer who is living with diabetes.

	PRE (n=60; 3 missing)		POST (n=61; 2 missing)	
	Frequency	Percent	Frequency	Percent
Strongly agree	6	10.0	15	24.6
Agree	10	16.7	40	65.6
Unsure	18	30.0	4	6.6
Disagree	22	36.7	1	1.6
Strongly disagree	4	6.7	1	1.6

(1)b. I know where to find a diabetes expert who can educate peers about diabetes.

	PRE (n=61; 2 missing)		POST (n=61; 2 missing)	
	Frequency	Percent	Frequency	Percent
Strongly agree	19	31.1	29	47.5
Agree	22	36.1	30	49.2
Unsure	11	18.0	1	1.6
Disagree	8	13.1		
Strongly disagree	1	1.6	1	1.6

(1)c. I feel confident in my ability to provide peer support for a peer who is living with diabetes.

	PRE (n=61; 2 missing)		POST (n=61; 2 missing)	
	Frequency	Percent	Frequency	Percent
Strongly agree	5	8.2	17	27.9
Agree	18	29.5	37	60.7
Unsure	23	37.7	5	8.2
Disagree	12	19.7	2	3.3
Strongly disagree	3	4.9		

(1)d. I feel comfortable raising awareness of the risk of developing diabetes with peers.

	PRE (n=61; 2 missing)		POST (n=60; 3 missing)	
	Frequency	Percent	Frequency	Percent
Strongly agree	14	23.0	18	30.0
Agree	27	44.3	38	63.3
Unsure	11	18.0	3	5.0
Disagree	7	11.5		
Strongly disagree	2	3.3	1	1.7

(2)e. I can best help by explaining the meaning of a person's blood sugar levels.

	PRE (n=61; 2 missing)		POST (n=60; 3 missing)	
	Frequency	Percent	Frequency	Percent
Strongly agree	12	19.7	12	20.0
Agree	30	49.2	24	40.0
Unsure	12	19.7	6	10.0
Disagree	6	9.8	14	23.3
Strongly disagree	1	1.6	4	6.7

(2)f. I can best help by introducing a person to a diabetes educator.

	PRE (n=61; 2 missing)		POST (n=60; 3 missing)	
	Frequency	Percent	Frequency	Percent
Strongly agree	27	44.3	32	53.3
Agree	29	47.5	28	46.7
Unsure	4	6.6		
Disagree	1	1.6		
Strongly disagree				

(2)g. I can best help by appreciating the burden of a person's diabetes and mental health self-management.

	PRE (n=61; 2 missing)		POST (n=61; 2 missing)	
	Frequency	Percent	Frequency	Valid Percent
Strongly agree	29	47.5	35	57.4
Agree	28	45.9	25	41.0
Unsure	3	4.9	1	1.6
Disagree	1	1.6		
Strongly disagree				

(2)h. I can best help by providing a person with nutritional advice.

	PRE (n=61; 2 missing)		POST (n=60; 3 missing)	
	Frequency	Percent	Frequency	Percent
Strongly agree	19	31.1	14	23.3
Agree	18	29.5	23	38.3
Unsure	16	26.2	6	10.0
Disagree	6	9.8	13	21.7
Strongly disagree	2	3.3	4	6.7

(2)i. I can best help by designing an exercise program for a person.

	PRE (n=61; 2 missing)		POST (n=61; 2 missing)	
	Frequency	Percent	Frequency	Percent
Strongly agree	11	18.0	6	9.8
Agree	16	26.2	21	34.4
Unsure	17	27.9	13	21.3
Disagree	15	24.6	15	24.6
Strongly disagree	2	3.3	6	9.8

(2)j. I can best help by acknowledging a person's challenges and concerns relating to diabetes and mental health.

	PRE (n=61; 2 missing)		POST (n=60; 3 missing)	
	Frequency	Percent	Frequency	Percent
Strongly agree	32	52.5	38	63.3
Agree	23	37.7	20	33.3
Unsure	5	8.2	1	1.7
Disagree	1	1.6	1	1.7
Strongly disagree				

(2)k. I can best help by understanding the process of grieving in relation to diabetes.

	PRE (n=61; 2 missing)		POST (n=60; 3 missing)	
	Frequency	Percent	Frequency	Percent
Strongly agree	26	42.6	37	61.7
Agree	23	37.7	22	36.7
Unsure	9	14.8	1	1.7
Disagree	3	4.9		
Strongly disagree				

(2)l. I can best help by promoting self-advocacy.

	PRE (n=61; 2 missing)		POST (n=60; 3 missing)	
	Frequency	Percent	Frequency	Valid Percent
Strongly agree	29	47.5	38	63.3
Agree	25	41.0	19	31.7
Unsure	7	11.5	1	1.7
Disagree			2	3.3
Strongly disagree				

(2)m. I can best help by identifying natural supplements for diabetes control.

	PRE (n=61; 2 missing)		POST (n=58; 5 missing)	
	Frequency	Percent	Frequency	Percent
Strongly agree	10	16.4	2	3.4
Agree	12	19.7	15	25.9
Unsure	22	36.1	19	32.8
Disagree	12	19.7	11	19.0
Strongly disagree	5	8.2	11	19.0

(2)n. I can best help by speaking to a physician on behalf of a person about their diabetes.

	PRE (n=61; 2 missing)		POST (n=60; 3 missing)	
	Frequency	Percent	Frequency	Percent
Strongly agree	8	13.1	8	13.3
Agree	25	41.0	28	46.7
Unsure	17	27.9	12	20.0
Disagree	9	14.8	8	13.3
Strongly disagree	2	3.3	4	6.7