


Research Article


# Influence to Inspire (I2I) – A Novel Diabetes Peer Support Program

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**Abstract:** Diabetes Mellitus (DM) is a chronic disease with many complications, necessitating the need for effective long-term control of this condition. Diabetes self-management is an important aspect of management, and dissemination of information through peer-support groups can improve positive behaviour pattern in self-management. **At this moment**, a practical peer-support group for diabetic patients in Malaysia is currently not available, but is a critical requirement in improving patient education and self-empowerment. **Therefore, the objective of this study is** to provide comprehensive knowledge to influencers regarding diabetes and its complications, as well as aiming to equip the influencers with confidence and skills to disseminate this knowledge to a larger group of patients with DM. **An Innovative Program** was introduced - A novel diabetes peer support patient education program designed to impart knowledge in an engaging manner. This program was divided into five main modules, each covering the more important aspects of diabetes, with specific targeted learning outcomes. Module 1 introduced the program, followed by a talk on motivational skills, and interactive lecture on important aspects of diabetes. Module 2 focused on more specific DM treatment, with hands-on experience followed by a session on exercise with certain techniques demonstration. Module 3 concentrated on complications of DM with lecturers, case-based scenario and experience-sharing, and ended with interactive games. Module 4 emphasized on healthy food choices in DM, with quizzes and cooking demonstration. Module 5 consolidated information provided during the program, followed by a session on psychological aspects of diabetes with role-play, and ended with a goal-setting activity. This program provided comprehensive information on diabetes and its management, and equipped influencers with the ability to disseminate the knowledge, aiming to improve patient self-management and empowerment in controlling diabetes, hence has a huge impact in reducing complications and co-morbidities associated with DM.

**Keywords:** diabetes mellitus, diabetes self-management, peer-support program



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## 1. INTRODUCTION

Diabetes Mellitus (DM) is a chronic disease with many complications and co-morbidities. The prevalence of diabetes has grown significantly worldwide, with increases of 2-4% per year, with type 2

diabetes accounting for more than 90% of cases. The global prevalence of diabetes in 2019 was estimated to be 9.3% (463 million individuals), and is anticipated to grow to 10.2% (578 million) by 2030 and 10.9% (700 million) by 2045 (Saeedi P et al, 2019), contributed largely by countries in Asia and the Western Pacific region such as Malaysia. In the last National Health and Morbidity Survey (NHMS) 2019, the overall prevalence of diabetes among adults in Malaysia was 18.3% (Ministry of Health Malaysia, 2020).

Patients with DM need comprehensive care of their condition to attain effective glycaemic control and reduce risk of complications, which requires both ongoing medical care and diabetes self-management. Diabetes self-management education (DSME) is a strategy used to optimize glycaemic control by educating people, and has been shown to encourage patients to acquire the information and capacities necessary for diabetes self-care (Powers MA et al, 2015) [8]. DSME programs has been shown to be effective in preventing the complications of diabetes and enhancing health outcomes in patients with diabetes (Mikhael EM, 2020). However, sustaining the appropriate behaviour required to maintain patient self-management in an ongoing program is a challenge. In this regard, peer support may be an important method in encouraging successful diabetes self-management, as it provides a platform for patients to engage in mutual knowledge-sharing, collaborative problem-solving, and emotional support. A recent meta-analysis has shown that DSME integrated with peer support effectively enhances glycaemic control in patients with type 2 diabetes (Azmiardi A, 2021).

Recognizing the need for a diabetes peer-support initiative in Malaysia to help facilitate control and with the potential of reducing complications in patients with diabetes, a novel peer education program was designed and initiated. This program, coined 'Influence to Inspire' (I2I), has been tailored as an education module for selected diabetes patients, termed 'influencers', who will be able to influence their targeted social members in providing support and guidance towards achieving optimum diabetes care. Hence, the objectives of this program include providing comprehensive knowledge to the influencer regarding diabetes and its complications, as well as aiming to equip the influencer with confidence and skills to disseminate this knowledge.

## **2. METHOD**

A diabetes peer support patient education program was designed and hosted by the Endocrine Team from Universiti Teknologi MARA (UiTM), Malaysia, with collaboration with the Malaysia Diabetes Association. This program was divided into five main modules, each covering the more important aspects of diabetes, designed to be delivered in half-day sessions spaced two to three weeks apart. Each module had specific targeted learning outcomes (Table 1).

## **3. INNOVATIVE PROGRAM**

This training program was conducted in an engaging manner with lecture sessions interspersed with group discussions, hands-on experience and entertaining games. Patient and care-giver information is booklets produced specially for this program were also distributed for better knowledge dissemination. The trainers included UiTM Endocrine team members consisting of endocrine specialists and diabetic educators (DE), as well as a psychologist, rehabilitation doctor, dietitian and nutritionist.

### *3.1 Module 1*

The first module opened with introduction to the peer-support program by the program director, followed by experience sharing by the influencers and an outline of motivational skills by the

psychologist. A lecture on overview of diabetes and management aspects was delivered by an endocrinologist with active involvement from the participants.

### 3.2 Module 2

The second module consisted of a more in-depth lecture on medical therapies in diabetes, followed by a talk from DE on insulin-handling, and accompanied by hands-on experience with insulin use and familiarity with different types of insulin. This module included a session on benefit and types of exercise by the rehabilitation specialist with demonstration of some exercise techniques with spirited participation by the influencers. Subsequently, the team members took part in a ‘memory-game’ on diabetes management

### 3.3 Module 3

The third module concentrated mainly on diabetic complications, with a lecture on each the microvascular and macrovascular complication of diabetes-mellitus with case discussion and experience-sharing. After a robust question-and-answer session, the influencers participated in a ‘matching-game’ regarding the complications and organs involved.

### 3.4 Module 4

The fourth module was on diabetes and food, mainly anchored by the dietitian and nutritionist, helped by DE. This session introduced healthy food choices with understanding of food-labels and ingredients, followed by a cooking demonstration and menu-planning, with quiz on recognizing suitable meals for diabetic patients.

### 3.5 Module 5

The fifth and final module started with a virtual tour of the UiTM hemodialysis unit and the rehabilitation suite, to illustrate the impact of certain diabetic complications on lifestyle. A session with the psychologist was next, with emphasis on the psychological aspects of diabetes, consisting of motivational drive to better disease management with improved compliance, as well as tips for effective communication, constructive advice and empowerment. There was a short role-play with a case-based scenario to demonstrate the role of psychological assessment. A goal-setting activity was then initiated, with each influencer invited to share their plan of knowledge dissemination and identification of peer group. Each member was also assigned to a health-care practitioner from the UiTM Endocrine team for further support, input and feedback. The program was concluded by a certificate-delivering ceremony with each influencer receiving a certificate signalling successful completion of the program and to be certified as an influencer.

Table 1. Diabetes peer-support program schedule

MODULE	DESCRIPTION	LEARNING OUTCOME
Module 1	Introduction to Diabetes Peer Support Program by Program Director  Session on motivational skills by psychologist <ul style="list-style-type: none"> <li>- Group activity</li> <li>- Experience sharing</li> </ul> Individual activity	The participant would have acquired basic information on: <ol style="list-style-type: none"> <li>1. Diabetes and the relevant epidemiological data</li> <li>2. The importance of and the roles of the influencer</li> <li>3. Diabetes and the underlying pathophysiology.</li> <li>4. Behavior modification for diabetes</li> </ol>

	<ul style="list-style-type: none"> <li>- Each participant will be required to create his/her own motivational theme</li> </ul> <p>Interactive Lecture</p> <ul style="list-style-type: none"> <li>- Introduction to diabetes</li> <li>- disease manifestation and acute complications</li> <li>- lifestyle and intervention</li> <li>- medications and management</li> <li>- Question and answer session</li> </ul>	<p>5. Oral medications, the importance of glycaemic control and prognosis</p> <p>6. The emotional and psychological issues in patients with diabetes</p>
Module 2	<p>Interactive Lecture</p> <ul style="list-style-type: none"> <li>- Medical therapies</li> <li>- Insulin- use, types, indication, dosing, side effects, titration</li> <li>- Home sugar monitoring</li> <li>- Case studies</li> </ul> <p>Practical tips on insulin by diabetic educators</p> <p>Hands-on experience</p> <p>Session on exercise – by rehabilitation doctor</p> <ul style="list-style-type: none"> <li>- Benefits, Adverse events during physical activities, Limitations during exercise</li> <li>- Roles of other exercises eg Yoga, Taichi, Qi Gong</li> <li>- Active participation</li> </ul> <p>Interactive games – ‘Memory Game’</p>	<p>1. The participant would have acquired adequate information and confidence to further discuss on insulin use, dosing, titration and monitoring.</p> <p>2. The participant would have acquired adequate information and confidence to further discuss on: Suitable exercise routines for diabetic patients with various complications and disabilities</p>
Module 3	<p>Interactive lecture: Complications</p> <p>Macrovascular complications</p> <ul style="list-style-type: none"> <li>- Cardiovascular</li> <li>- Heart disease and stroke</li> <li>- Prognosis and outcome</li> <li>- Co-morbidities – hypertension, hyperlipidaemia</li> <li>- Question and answer</li> </ul> <p>Microvascular complications</p> <ul style="list-style-type: none"> <li>- Diabetic kidney disease</li> <li>- Proteinuria</li> <li>- Neuropathy</li> <li>- Diabetic foot care</li> <li>- Retinopathy</li> </ul> <p>Interactive games – ‘Matching Game’</p>	<p>1. The participant would have acquired adequate information and confidence to further discuss on the following complications, preventive measures and treatment of:</p> <ol style="list-style-type: none"> <li>a. Diabetic kidney disease</li> <li>b. Neuropathy</li> <li>c. Diabetic Foot Care</li> <li>d. Retinopathy</li> </ol> <p>2. The participant would have highlighted their experience, challenges and opportunities; both as patients and influencer.</p>

<p>Module 4</p>	<p>Diabetes and food – anchored by nutritionist and diabetic educators</p> <p>Choice of healthy food                      - food label                      - content                      - ingredient                      - “know your food”</p> <p>Healthy cooking demonstration                      Menu planning</p> <p>QUIZ</p>	<ol style="list-style-type: none"> <li>1. The participant should be able to read food labels and identify healthy food options</li> <li>2. Participants should be able to plan healthy meals</li> </ol>
<p>Module 5</p>	<p>Consolidation of information acquired during program</p> <p>Virtual tour                      - hemodialysis unit                      - rehabilitation suite</p> <p>Psychological aspect in diabetes/                      diabetes and psychology                      - motivation towards better disease management                      - how to increase compliance and healthy lifestyle                      - effective communication                      - empowering patient                      - constructive advice</p> <p>Goal setting                      - peer identification</p> <p>Certificate awarding ceremony</p>	<ol style="list-style-type: none"> <li>1. The participant would have understood the impact of the complications to a diabetic patient.</li> <li>2. Participants should be able to identify the benefits of the above modules and the changes implemented in their lives.</li> <li>3. Provide a plan for their role as an influencer.</li> </ol>

#### 4. CONCLUSION

This novel peer-support program is designed to educate and empower a group ‘influencers’ with the aim of providing comprehensive diabetes support in the manner of self-management to a wider pool of diabetic patients. This in turn is targeted to help patients manage their condition better and with the short- and long-term benefit of reducing complications and co-morbidities. This program is designed for nationwide application with a huge potential for sustainability.

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