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Original Article

Feedback about Conversation Map™ tools from trained facilitators in Pakistan

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ABSTRACT

Objective: To assess the views and feedback of trained Map facilitators on content and usability of the Diabetes Conversation Map™ (DCM) education tools.

Methodology: This study included Pakistani trained health care Map facilitators from June 2010 to September 2011. Four separate Map sessions on how Diabetes Works, living with Diabetes, eating healthy & exercising, and starting insulin treatment were facilitated by a trained facilitator. Each 60–90-minute session includes 3–12 trained facilitators. Evaluations were performed after the session through a questionnaire having questions about use of DCM for educating people with diabetes, contents of each Map, role of facilitator, and overall impact of DCM education tools on participating respondent.

Results: Out of 274 HCPs, 94.3% and 96% agreed that it is a better way of patient education and it provides better education as compared to print material respectively. Around 70% and 80% participants agreed that contents of “How Diabetes Works” & “Healthy Eating and exercise” are not difficult for people with type 2 diabetes mellitus (T2DM) respectively while most of the participants (80% and 76.5%) found contents of “Living with Diabetes” and “Starting Insulin” valuable and easy to apprehend. Most of the participants mentioned that self-monitoring of blood glucose, understanding regarding oral hypoglycemic agents, and insulin injecting technique should be included. Majority healthcare providers (80%) were satisfied with facilitation of Expert Trainer.

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Conclusion: Most of the HCPs found DCM as a useful tool for educating people with diabetes. However, some modifications are required to further enhance its effectiveness.

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1. Introduction

Diabetes is the most common non-communicable disease globally and the incidence is increasing worldwide. According to International Diabetes Federation (IDF), one person in 10 adults has diabetes in Middle East and North Africa (MENA) region. There were 34.6 M people affected with diabetes in 2013, which is expected to increase 67.9 M by the year 2035 in this region.¹ This evolving epidemic has increasing rate of diabetes-related morbidities and mortality. Centers of disease control and prevention confer that diabetes is the seventh leading cause of deaths.² Diabetes-related complications such as coronary artery and peripheral vascular disease, stroke, diabetic neuropathy, nephropathy, retinopathy, and amputations are resulting in increasing disability, reduced life expectancy, and an increase in massive health costs.³

Diabetes self-management education (DSME) plays great role in the management of diabetes. Through DSME, people with diabetes acquire knowledge, self-management skills, and confidence to modify their lifestyle and practice self-management, which ultimately improves health outcomes.⁴ Dietary modifications, physical activity, stress management, and pharmacologic measures with DSME help in achieving desirable outcomes for people with diabetes.⁵ Several ways are used to implement DSME worldwide, such as group education, one-to-one educational sessions, web sites, audio and video aids, print media, and SMS text mass messaging.^{6,7}

Diabetes Conversation Map™ education tools are one of the latest modality for the implementation of DSME.⁸ It is developed by Healthy Interactions in collaboration with International Diabetes Federation (IDF) and sponsored by Lilly global since 2008.⁹ This is a evidence-based tool which follows clinical guidelines of Diabetes management 2009–10 by American Diabetes Association (ADA). Diabetes Conversation Map™ education tools are series of metaphors through which people from different social and cultural background get engaged in discussion. They share their personal beliefs, experiences, and misconceptions about living with diabetes.¹⁰ The discussion undergoes in guidance of trained facilitator. The facilitator drives session with the help of guide. All participants learn facts and information related to diabetes self-management and become empowered to find best possible solutions for their diabetes related problems. The pictorial visual on the Conversation Map™ tools provide understanding and guidance about dealing different situations, which they face during daily self-management and relate them to their personal experiences. The activity cards are used to initiate discussion through which participants gain knowledge and self-management information from each other under supervision of facilitator.¹¹ The diabetes Conversation Map™ education tools are implemented in over 120

countries and translated to 35 different languages. People with diabetes get empowered and develop confidence to take responsibilities and informed decisions for their own health. At the end of each of four sessions, participants set goals and take step toward behavior modifications, which lead to improvement in self-management of their diabetes. There is scarcity of the data regarding HCPs views about the use of these Map tools; hence, the present study was planned.

The aim of this study was to assess the views of healthcare professionals regarding the impact of Map sessions on knowledge, attitude, and confidence about educating people with diabetes through Conversation Map™ tools.

1.1. Methodology

This cross-sectional study was conducted at Baqai Institute of Diabetology and Endocrinology (BIDE), a tertiary care Diabetes Centre of Karachi, Pakistan, from June 2010 to September 2011. Two hundred and forty-seven healthcare professionals (HCPs) from various primary, secondary, and tertiary care centers, nursing schools, and medical colleges related with diabetes care and patient education were included in the study. All of the HCPs in a study were previously trained on the use of the four Conversation Map™ tools and certified as Map facilitators. The purpose of the facilitator training is to prepare the HCPs to use the Map tools with PWD. The Map is a 3-by-5-foot table-top visual with interesting drawings of metaphors of daily self-management situations which are familiar to people with diabetes. In a facilitator training, the Map was placed on a table with HCPs gathered around it in U-shape with an Expert Trainer sitting in the middle. The first Map reviewed was titled “How Diabetes Works” which provides an overview of diabetes and is designed to address how diabetes happens and concept of possible chronic complications. The second Map “Living with Diabetes” provides information regarding hypo- and hyperglycemia, psychosocial adjustments, and issues related to a daily self-care. The third Map was “Healthy Eating and Exercising” which provides information about all food groups, eating patterns, and portion sizes along with different types of physical activities. This Map also provides the concept of balancing food with physical activity. The fourth Map was “Starting Insulin treatment” and offers information about natural progression of diabetes, psychological reactions toward insulin treatments, site rotations and insulin handling in daily self-care and with other common situations with type 2 diabetes.

There are six components of Map experience that were demonstrated during the training, such as Map visual, information sharing, activity cards, group interaction, facilitator guide, and goal setting. Three to twelve healthcare professionals took part in each session regarding self-management education which would be provided to people with diabetes through this novel tool.

Table 1 – Overall impression of healthcare professionals about use of Conversation Map™ tools for educating people about diabetes self-management.

Questions	Yes	No	Not sure
It is a better way of educating about diabetes self-management than one-to-one diabetes education.	214 (86.6)	17 (6.9)	16 (6.5)
It is a better way educating about diabetes self-management than delivering lecture.	233 (94.3)	10 (4.0)	4(1.6)
It is a better way educating about diabetes self-management than handing out printed material.	237 (96.0)	6 (2.4)	4 (1.6)
Data presented as n (%).			

The facilitator sessions were evaluated immediately after their conclusion through a feedback questionnaire, which was specially designed for this study but not validated.

The pre-designed questionnaire included 7 sections.

Overall impression about use of Diabetes Conversation Map™ education tools for educating people about diabetes was as follows:

- (i) Overall impression about contents of Map 1 “How Diabetes works”.
- (ii) Overall impression about contents of Map 2 “Living with Diabetes”.
- (iii) Overall impression about contents of Map 3 “Healthy Eating and Exercising”.
- (iv) Overall impression about contents of Map 4 “starting Insulin Treatment”.
- (v) Influence and understanding about different aspects of diabetes self-management in Conversation Map™ tools.
- (vi) Role of facilitator.

1.2. Statistical analysis

Data was entered and analyzed through statistical package for social sciences (SPSS) version 16.0. Values were presented as numbers and percentages. Analysis of Frequency Data deals with data that has been tabulated.

2. Results

2.1.1. Overall impression of healthcare professionals about use of Conversation Map™ tools for educating people about diabetes self-management

After the facilitator training program, 214 (86.6%) healthcare providers found Conversation Map™ tools as a better way of providing diabetes self-management education compared to one-to-one diabetes education session. Two hundred and thirty-three (94.3%) participants agreed that is a better way of patient education than delivering a lecture and 237 (96%) believed that Conversation Map™ tools provide better education instead of providing printed handouts regarding diabetes self-management education to people with diabetes (Table 1).

2.1.2. Impression about contents of Conversation Map™ tool “How Diabetes Works”

After the training of facilitators, 172 (69.6%) of them agreed that content of Conversation Map™ tools “How Diabetes Works” is not difficult for people with diabetes. Most of the participants said that content of respective Map is useful for people with diabetes in their daily self-care. Two hundred and twenty-seven (91.9%) HCPs found them appropriate to local Pakistani culture (Table 2).

Table 2 – Impression of healthcare professionals about contents of Map 1 “How Diabetes works”.

Questions	Yes	No	Not sure
Are the contents difficult for most of the people with diabetes?	60 (24.3)	172 (69.6)	15 (6.1)
Are the contents useful for most of the people with diabetes?	221 (89.5)	8 (3.2)	18 (17.3)
Are contents culturally appropriate for most of the people with diabetes in Pakistan?	227 (91.9)	8(3.2)	12 (4.9)
Impression of healthcare professionals about contents of Map 2 “Living with Diabetes”			
Are the contents difficult for most of the people with diabetes?	34 (13.8)	202 (81.8)	11 (4.5)
Are the contents useful for most of the people with diabetes?	230 (93.1)	5 (2.0)	12 (4.9)
Are contents culturally appropriate for most of the people with diabetes in Pakistan?	224 (90.7)	18 (7.3)	5 (2.0)
Impression of healthcare professionals about contents of Map 3 “Healthy Eating and Exercise”			
Are the contents difficult for most of the people with diabetes?	19 (7.7)	225 (91.1)	3 (1.2)
Are the contents useful for most of the people with diabetes?	234 (93.7)	9 (3.6)	4 (1.6)
Are contents culturally appropriate for most of the people with diabetes in Pakistan?	236 (95.5)	6 (2.4)	5(2.0)
Impression of healthcare professionals about contents of Map 4 “Insulin Treatment”			
Are the contents difficult for most of the people with diabetes?	51 (20.6)	189 (76.5)	7 (2.8)
Are the contents useful for most of the people with diabetes?	240 (97.2)	4 (2.0)	2 (0.8)
Are contents culturally appropriate for most of the people with diabetes in Pakistan?	233 (94.3)	10 (4.0)	4 (1.6)
Data presented as n (%).			

Table 3 – Overall impression of healthcare professionals about different aspects of diabetes self-care management.

Questions	Yes	No	Some what
It enhanced my level of understanding about the prevention of diabetes	12 (4.9)	228 (92.3)	7 (2.8)
It enhanced my level of understanding about the causes of diabetes	24 (9.7)	223 (90.3)	0 (0)
It enhanced my level of understanding about the progression of diabetes	7 (2.8)	224 (90.7)	16 (6.5)
It enhanced my level of understanding about complications of diabetes	38 (15.4)	65 (26.3)	144 (58.3)
It enhanced my level of understanding about self-monitoring of blood glucose.	11 (4.5)	230 (93.1)	6 (2.4)
It enhanced my level of understanding about foot care of diabetes	2 (0.8)	239 (96.8)	6 (8.4)
It enhanced my level of understanding about use of medicines for the self-management of diabetes	3 (1.2)	236 (95.5)	8 (3.2)
It enhanced my level of understanding about use of insulin for the self-management of diabetes	175 (70.9)	69 (27.9)	3 (1.2)
It enhanced my level of understanding about proper way of injecting insulin	0 (0)	240 (97.2)	7 (2.8)
It enhanced my ability to educate people about diabetes	204 (82.6)	36 (14.6)	7 (2.8)
It enhanced my ability to use <i>Conversation Map</i> TM tools for educating people about diabetes	231 (93.5)	5 (2.0)	11 (4.5)
It enhanced my interest in educating people about diabetes	223 (90.3)	7 (2.8)	17 (6.9)
It enhanced my belief in importance of educating people about diabetes	219 (88.7)	9 (3.6)	19 (7.7)
Data presented as n (%).			

2.1.3. Impression about contents of *Conversation Map*TM tool: “Living With Diabetes”

After the training, 202 (81.8%) participants stated that content of living with Diabetes *Conversation Map*TM tool is easy to understand for people with diabetes. Two hundred and thirty (93.1%) healthcare providers found them valuable with respect to diabetes self-care management. Two hundred and twenty-four (90.7%) healthcare providers found them culturally appropriate (Table 2).

2.1.4. Impression about contents of *Conversation Map*TM tool: “Healthy Eating and Exercising”

After the completion of *Conversation Map*TM tools facilitator training program, 225 (91.1%) participants believed that content of Healthy Eating and Exercising *Conversation Map*TM tool is not difficult to understand for people with diabetes. Majority of healthcare providers found them beneficial and culturally appropriate for most of the people with diabetes in Pakistan (Table 2).

2.1.5. Impression about contents of *Conversation Map*TM tool: “Starting Insulin treatment”

At the end of training program, 189 (76.5%) healthcare providers agreed that content of Starting Insulin treatment *Conversation Map*TM tool is easy to apprehend for the people with diabetes while seven of them (2.8%) were doubtful. Most

of the participants found contents of respective *Map*TM tool advantageous in daily self-care management of diabetes and culturally appropriate for local society which is affected with diabetes (Table 2).

2.1.6. Overall impression of healthcare providers about different aspects of diabetes self-care management

After the completion of facilitator training, most of healthcare providers have thought that information regarding primary prevention of diabetes is missed from *Conversation Map*TM tools. It was pointed out by 230 (93.1%) healthcare providers that the information regarding self-monitoring of blood glucose is totally neglected in these innovative education tools. Majority of the participants have mentioned that understanding regarding oral hypoglycemic agents and insulin injecting technique should be included to enhance its effectiveness. Two hundred and thirty-one (93.5%) participants stated that *Conversation Map*TM tools has enhanced their ability to educate people with diabetes. Interest and belief in importance of educating people about diabetes have been enhanced in most of the participants (Table 3).

2.1.7. Role of Expert Trainer in facilitator training

Majority of the participants stated that Expert Trainer was confident in her role. Two hundred and thirty-three (94.3%) healthcare providers were satisfied that Expert Trainer has given enough time to each *Map* during the whole training and

Table 4 – Role of facilitator in DCM training session.

Questions	Some what	Yes	No
The facilitator was confident in performing her role	9 (3.6)	237 (96.0)	1 (0.4)
The facilitator was friendly in facilitating the session	12 (4.9)	235 (95.1)	0 (0)
The facilitator was flexible in facilitating the session	13 (5.3)	230 (93.1)	4 (1.6)
The facilitator gave enough time to the session	14 (5.7)	233 (94.3)	0 (0)
The facilitator was giving comparable attention to all the attendees	8 (3.2)	238 (96.4)	0 (0)
The facilitator was respectful to all the attendees	7 (2.8)	240 (97.2)	0 (0)
Data presented as n (%).			

stated that Expert Trainer has given comparable attention to all attendees (Table 4).

2.2. Limitations

There are some limitations in this study. A notable number of healthcare providers have rejected to join facilitator training for the use of the diabetes Conversation Map™ tools. The questionnaire tool used has not been validated.

3. Discussion

The present study provides feedback from the healthcare providers (HCPs) who participated in facilitator training for the use of the diabetes Conversation Map™ tools.

The HCPs who have participated in this study belongs to various disciplines of healthcare system including nurses, pharmacist, physiotherapist, dietician, doctors as well as trained diabetes educators. All of the training sessions were conducted by the same Expert Trainer for the diabetes Conversation Map™ tools who is authorized to train other HCPs on the use of the Map™ tools.

Majority of participants appreciated the interactive dialog technique demonstrated at the training. The Map methodology helps in building facilitation skills needed when providing diabetes self-management education (DSME). Providing DSME is much more than just teaching facts and information as it also encourages people with diabetes to share their personal experiences and improve psychosocial behaviors.¹²

Regarding contents of the different Map tools, participants had varied opinions; some participants believed that the knowledge provided in the Map was simple and easy to understand, while others felt that contents were too basic and details of various aspects of diabetes self-management were not incorporated. Similar observations were reported in new socio-educational tool in diabetes care study in Nigeria.¹³

The confidence in providing diabetes education has improved among the healthcare providers who attended the Map training sessions. Similar observation was reported in a study on modified AADE diabetes education curriculum.¹⁴ Another study from Palm Beach Atlantic University, USA also indicates that Conversation Map™ tools are effective in peer-facilitation support in overcoming the challenges of diabetes self-management.¹⁵

Participants of these sessions were very assertive that knowledge regarding healthy eating and physical activity was practically covered and was sure that it would be beneficial for diabetes self-management in people with T2DM. Similar findings were reported in a study, Applying Conversation Map Program as a Nutrition Education Program for Type II Diabetic Patients at Saudi Arabia.¹⁶

Regarding each Map™ tools content, participants felt that it was culturally appropriate and people with T2DM can relate their personal experiences and concerns to it.¹⁷ Map sessions give opportunity to participants to discuss various problems encountered in daily life and also to come to a better solution regarding these problems. Similar results were demonstrated in a study conducted in Department of Nursing, James Madison University, Harrisonburg, USA.¹⁸

Topics covered in the Conversation Map™ tools were considered appropriate; however, healthcare providers emphasized the need for including more contents regarding causes of diabetes, oral hypoglycemic agents, and insulin as well as self-monitoring of blood glucose (SMBG).

4. Conclusion

Diabetes Conversation Map™ tools are useful education curriculum for diabetes self-care management education. Healthcare providers indicated that the Map™ tools training had a positive impact on their knowledge, attitude, and confidence in providing DSME. However, some modifications were suggested such as adding causes of diabetes, natural progression of diabetes, self-monitoring of blood glucose, oral hypoglycemic agents, insulin types, and proper way of injecting insulin. The suggested additional topics are needed to further enhance Map™ tools effectiveness among healthcare providers.

Conflicts of interest

The authors have none to declare.

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