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Experience of adult individuals with Type 2 diabetes about diabetes: A qualitative study

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This study was carried out in a qualitative manner in order to identify the emotions and life experience of the patients with Type 2 diabetes with regard to their disease in the Endocrinology Clinic of Bayındır Hospital Kavaklıdere between December 2014 and April 2015. Twenty-one individuals, who were being monitored in the related department and whose consent forms were obtained, were recruited. The ethics committee approval was obtained for the study and statistical data were employed in respect of demographic features. The data were collected by using interview forms and in-depth interviews. Microsoft Word 2007 word processing software was used to analyse the data. A face-to-face interview technique was utilized by raising pre-determined unbiased and non-directing questions to the individuals. A voice recording was used in the interviews which lasted at least 20 minutes, and written minutes of the data were issued within 24 hours after the interview. The content analysis was used in analysing the qualitative data so that the theming of the concepts and considerations pertaining to the subject addressed is determined through repetitive reading of the text on which the interview was analysed and classification and coding of the study as per sub-objectives. Consequently, there were 14 themes in total, namely lack of information, shock, fear, sadness, denial, feeling of guilt, anger, unacceptance, change of habits, adaptation difficulty, professional hardship, social challenges and environmental factors and feeling better. It is suggested that the process of acceptance of diabetes and adaption to the treatment should be facilitated, planning trainings on diabetes per individual requirements through sympathetic approach.

Key words: Diabetes, Emotions, Adaptation process, Qualitative

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Introduction

Diabetes is a chronic metabolism disease that entails continuous medical care. The medical staff and diabetic patients must be trained in order to mitigate the risks of acute complications which are caused by diabetes, and avoid adverse chronic effects (on the eye, kidney, neural and cardiovascular systems) which might need costly treatments in the long run.[1]

When the patients are diagnosed with any disease, they develop various conceptions about their status. Such conceptions constitute the key behavioural features about the management of the disease. Variation in the perception and opinion of the patients in respect of the disease is an active process which may cause a change in responding to treatment. Such perceptions or cognitive processes directly affect the emotional response and treatment adaptation of the patients.[2] The attitude and behaviour of the healthcare institution and medical staff bear foremost importance in the treatment and care of the patients with diabetes. Communication has great importance in getting acquainted with the patient, obtaining his/her history, diagnosing and deciding on the therapy and further applying such therapy along with directing the respective care in order to improve its effectiveness.[3] Deficiencies in communication adversely impact the patient's satisfaction, patient's adaptation to treatment and respective health consequences.[4]

Individuals with diabetes undergo various emotions in their business or private life. Emotions considered in this regard are elements of human behaviour and determinants in various fields from the inner wold of the individual to mutual relations, and have a significant role in human behaviour.[5] It is possible for the chronic patients to cope with their emotional status which are caused by the disease,and gain skills in order to face the daily stress on account of the disease by changing their beliefs in respect of the disease in a positive direction[6]

Emotions affect the human perspective on life, and human morale and motivation either favourably or adversely, they are critical for an individual, but they may bolster the morale and performance of individuals if well managed. Getting to know the individuals closely and approaching them sympathetically in respect of their emotions and, in turn, showing integrated patient approach is a vitally critical factor in terms of achieving success in treatment. As a consequence, being familiar with the emotions and approaching the patients accordingly ensure that patients continue diabetic self-management in harmony.

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This study was conducted for the purpose of determining in detail the emotions felt by the Type 2 adult patients with diabetes and their experience with respect to the disease.

Patients and methods

Type of study

This is a qualitative study.

Criteria for selecting population and sample

Interviews were conducted with individuals with diabetes in Endocrine Clinic of Bayındır Hospital Kavaklıdere in order to determine the sample of the study between December 2014 and April 2015 after obtaining their written consents forms and the approval of ethics committee. In consideration of the repeating data obtained from the participants, the interviews were finalized after 21 patients.

Data collection

The data in the study were collected by means of two questionnaires prepared by the researcher. The first questionnaire was about demographic features consisting of 10 questions which included age, marital status, educational level, profession, years in diabetes and history of diabetic family member, and the second questionnaire was the semi-structured in-depth face-to-face individual interview consisting of four questions (Table 1).

In the study, understanding the subjective perception and experience of the participants are intended. The data were collected from the patients with diabetes once by means of semi-structured in-depth individual interview method where face-to-face interview was employed.[7]

In order to access the researcher's interviewing ability and the voice recording technically, a pilot interview was conducted with a participant. The pilot study was not incorporated in the study.

The individuals involved in the study were given an appointment depending upon their convenience were interviewed at the appointment date and time. The diabetes training room, which is usually silent, was preferred because patients could express their emotions and experiences sincerely, comfortably and in detail and it provides a comfortable interview.

Table 1 Semi-structured in-depth face-to-face interview questions.

1. What did you feel when you were first informed of diabetes? Can you please describe the feeling? How did such feelings vary in time?
2. What impacts diabetes cause in your daily life? What did you have to change that you used to do in the past?
3. What problems have you had during routine practices such as dieting, exercising, eating, using of pills and blood sugar follow-up? What methods you have used during coping with such problems?
4. How would you comment on the support you get from your family during the course of your disease?

During interviews, the smart cell phone was employed as a recorder in order to obtain the responses of patients in a proper and accurate manner. Interviews conducted lasted 20 minutes on average (12–52 minutes). The written report of the obtained data was issued within a period of 24 hours.

The in-depth interviews were intended to be implemented and interviews were finalized when the profoundness of the information was obtained by both participant and researchers. The sample selection was ceased after 21 patients with diabetes and a new and distinct information is no longer obtained. On the basis of information, it was understood that certain matters become recurring and an opinion is formed as to the fact that a specific contentedness is attained as set forth in the qualitative literature of the application process of the study.[8–10]

Data analysis and interpretation

The actual names of the patients with diabetes who provided opinion for the study and any introductory additional information in respect of such patients were kept confidential in accordance with the principle of protection of privacy, and each participant's information was recorded by assigning him/her a different number.

The in-depth interviews, which are completed with 21 patients, were transcribed and analysed in respect of this study which is based upon a qualitative approach, and 6,735 words in total were analysed. Microsoft Word 2007 word processor was utilized for reading, classification and theming. Numerical and percentile calculations were used in interpreting the distributions relating to the socio-demographic characteristics.

Results

In this section, care was taken in order to present the data completely to relay the opinions of the individuals with diabetes. Explanations of the results were provided along with the descriptive narration.

Analysis of demographical data

The demographic features of the participants are provided in Table 2.

Analysis of qualitative data

The data in relation to the general groups and the expressions of the individuals with diabetes who participated in the study are presented in tables (Table 3).

The study reveals the fact that there are three groups which are combined with the data are combined: acquaintance with diabetes, perception of diabetes and life with diabetes.

Fifteen subjective statements in acquaintance with diabetes group, 43 statements in perception of diabetes group and 50 subjective statements in life with diabetes group are provided as raw data. Fourteen themes in total were determined: 'fear, anger, shock, feeling of guilt, sadness, denial, unacceptance in perception of diabetes significance group, and change in comfort

Table 2 Distribution of socio-demographic features of the individuals having participated in the study.

Variable	Number	%
Gender		
Woman	7	33.3
Man	14	66.6
Age		
40–50	1	4.7
51–60	6	28.5
61–70	12	57.1
71 and over	2	9.5
Education		
University	10	47.6
College	1	4.7
High school	9	42.8
Secondary school	1	4.7
Profession		
Retired	19	90.4
Working	1	4.7
House wife	1	4.7
DM in family		
Yes	14	66.6
No	7	33.3
Years with DM		
1–10 years	11	52.3
11–20	6	28.5
20 and over	4	19
Total	21	100

(positive–negative): "change of habits, feeling better, adaptation difficulty, professional hardship, social challenges and environmental factors"' in life with diabetes group.

Discussion

Any study conducted by means of a qualitative method is specific to the group being studied, because the results of the study are affected by individual perceptions and features which are relating to identity as well as social and cultural structure in which the individual lives and, exhibit variations in individuals because such results are subjective. In this context, the studies in the literature are expected to be parallel with this study.

Acquaintance with diabetes

Theme 1: 'Lack of Information'

Majority of the patients with diabetes who participated in the study stated that they could only learn what kind of a disease the diabetes was when they were diagnosed with the disease. On the other hand, the individuals have seen patients with diabetes stated that they did not care about diabetes due to their lack of knowledge on the disease. Sixteen patients with diabetes stated that they did not possess any accurate information about the disease until they were diagnosed with diabetes, and that they had thoughts about it based on the second-hand information. Only five patients with diabetes were observed to be informed about diabetes; however, such information was inaccurate.

The study evidences that patients with diabetes develop misconceptions about diabetes because they possess minor or no information about the disease. The study shows that the lack of information is quite effective in respect of developing misconceptions and misperception of diabetes. Furthermore, patients with diabetes had affected by bad and inaccurate information which are gain from their friends contribute to such misconceptions and misperceptions.

The chronic diseases result in a slow and progressive deviation and irrevocable changes in normal physiological functions, and occupy a lengthy period in life, and necessitate continuous medical care and treatment. With such characteristics, it is crucial for individuals to assume and continue the responsibility for their own treatment and care for a lifetime.[11] The deaths attributable to chronic diseases occur due to complications. The complications emerge on grounds of ineffective patient management and failure to achieve intended targets.[12] It is advised that knowledgeable, self-confident, talented patients who participate in the care are more likely to develop activities which may improve their health.[13] While Hibbard and Greene emphasize the fact that the patients must plunge into action independently and be eager; that is to say, take active role in order to manage their own health and care. This case is also a precursor for a successful self-management and health improvement as much as the patient is involved in the process of decision making.[14,15] In a study conducted with individuals with diabetes, the relation between the active patient, the admission to hospital and the frequency of visiting an emergency service was reviewed, and the patients in the first phase were observed to have more likelihood of being hospitalized and visiting the emergency service more than those in the fourth phase.[16]

The individuals are usually not informed sufficiently in respect of both their disease and the treatment applied. Öztürk *et al.*, in their study conducted with haemodialysis patients, set forth that the patients are not informed sufficiently about chronic kidney deficiency and dialysis during the period when they are connected to a dialyser.[17] This causes individuals with diabetes to develop negative opinion against diabetes, and feel alone, and sometimes disrupt what they are required to do or never do the needful due to the feeling of weariness. Usually, mistaken or deficient practices are carried out in controlling the diabetes in the community and they are caused by the misconceptions and deficient information pertaining to the disease. Ensuring the continuity of the information provides for the patients will facilitate coping with the disease and preventing the complications.[18]

Perception of diabetes

The study shows that the individuals with diabetes show that their reaction to diabetes is usually similar. The reasons for reactions are observed to be the lack of information about diabetes and the impact of negative experience and information obtained from close friends and relatives. Most of the individuals do not forget the

Table 3 Groups and themes of the statements of the individuals with diabetes who participated in the study.

Significance group	Acquaintance with diabetes
Themes	'Lack of Information'
Participant	Important expressions
1	'If only I was consciously told before about diabetes'
15	'There was nothing like this around, so I thought it would pass way'
12	'However, my only ailment was dragging my foot and such disappeared later on. I then realized I was dragging it when I had diabetes'
20	'I did not know it since it did not exist in anybody within the family'
5	'I did not care about it due to lack of information and did not react at all. Nothing has changed in my life. Perhaps, I did not care for just reason. I was not concerned and anxious. Nothing did I know when I was first told'
11	'I had no much knowledge. I used to imagine diabetes as a disease where someone gets diabetes and woe was him'
13	'I used to think that diabetes is a problem of fat people or it is hereditary'
16	'I was not fully conscious about diabetes then'
8	'I did not know what diabetes means back then'
Significance group	Perception of diabetes
Themes	'Fear' 'Anger' 'Shock' 'Feeling of Guilt' 'Sadness' 'Denial' 'Unacceptance'
Participant	Important statements
3	'I think and hope that the end would not be bad'
15	'My life turned upside down when I first came here and was told that I have diabetes because I was shocked. I thought that I will be dependent upon certain things for the rest of my life. My biggest fear was insulin'
6	'I have a close acquaintance with diabetes who had his foot cut. That's why, I started to care about it'
11	'I used to this that someone gets diabetes and woe is him'
9	'You are touched when you are first informed about the disease and you feel that you will not be able to live certain things'
10	'I felt bad when I first heard of it and I terribly feared. My previous order was better. I had not fear at all. But now I fear. I have that same fear of getting high diabetes and whether it would affect my eye or kidney'
16	'I thought that life is over for me'
12	'I have been diabetic for 20 years, but I have now accepted the disease for the first 10 years. I did never believe it. Later on, I used to get furious when someone told me that I have diabetes. I was very lively back then, but I was down when I was informed of it'
1	'A certain shock went through'
2	'I felt terrible. I did not believe when I was told all of a sudden that I have diabetes. How I cried for being an individual with diabetes initially, for "why I got diabetes"'
8	'I was surprised when I got it. I was shocked what this disease is all about'
19	'I had an irregular eating habit. I was said for "not caring about myself and deranged my health because I was watching my relatives having lost their eye sight due to the disease, or their suffering. I have personally experienced this and saw what happened to those who did not heed the needful"'
20	'I would have recuperated better if I responded back then I did not accept it. I came back 1 year later. I did not want to come over due to my belief in mistake'
5	'My sadness at that time was about my being a patient with diabetes and why it hit me'
17	'I was sad, of course, back then and I did not like it. I was demoralized to be on the other side as I am doctor myself'
14	'I denied when my doctor told me that I have diabetes and did not accept it. But I got used to it gradually afterwards and accepted it'
Significance group	Living with diabetes
Themes	'Change in Comfort' (positive/negative)
Change in comfort (positive): Theme 1: 'Change in habits' Theme 2: 'Feeling better'	Change in Comfort (negative): Theme 1: 'Adaptation difficulty' Theme 2: 'Professional hardships' Theme 3: 'Social challenges' Theme 4: 'Environmental factors'
Change in Comfort (positive) Theme 1: 'Change in habits' Theme 2: 'Feeling better'	
Participant	Important statements
9	'I usually have a slowcoach life style. I was able to reduce my blood sugar through strolls after meals'
15	'I have started sports meanwhile. I did not ever make sports in the past and now I have at least a brisk walk for 40 minutes every day'
2	'I did not used to have breakfast in the past. I have learned that breakfast, interim meals and eating is of great importance'
6	'I started to care more about myself'
13	'I have learned to be self-disciplined'
16	'I have realized the existence of a watch on my wrist through diabetes and started regular eating'
19	'I have had no difficulty, especially I cared more for I will lose weight and be healthier'

Continued

Table 3 Continued.

Significance group	Acquaintance with diabetes
21	'I eat my lunch in a timely manner which I used to eat late and I am trying to have interim meals'
20	'I had no hardships in changes. Your perspective on life get more positive'
7	'My life perspective is the thing that have changed much. I was short-tempered, but now I see the life and everything more favorably'
3	'I am trying to be more mobile and I feel better now'
5	'I had a hardship in adapting to it, for I felt compelled by it and my friends and family pushed me into it'
Change in Comfort (negative):	
Theme 1: 'Adaptation difficulty'	
Theme 2: 'Professional hardships'	
Theme 3: 'Social challenges'	
Theme 4: 'Environmental factors'	
9	'I have had a certain trouble indeed. For example, sweet craving when we are home, but it does not occur to me when I am outside, also nuts and fruits'
14	'I feel deficiencies and restrictions in my social life. I had to change my habits and it was hard'
12	'Of course, I am having a hardship now. Because, you get hungry but cannot eat as you like'
10	'My previous order was better. I could get around and eat everything. I get demoralized, for instance, if I have high sugar level'
3	'I was forced to shut down my office for being away from stress'
19	'Negative aspects; you go out to somewhere and you do not care about your eating, and you get the feeling of hunger after certain hours for the fear of ending up with something bad'
18	'That is; my life is all changed. There are now prohibitions. I was free and doing everything, but after diabetes I cannot do whatever I want'
11	'I had difficulties initially. Because, you go somewhere and they set the table and I have a very good appetite and eat them'
16	'Eating is indispensable in our culture (in an emphasizing tone). Most possibly, the diet is the worst punishment by the God to a person from Southeastern Region'

moment when they were diagnosed with diabetes and the emotions it invoked in them.

Theme 1: 'Fear'

In the study, some of the individuals having a diabetic family member stated that they feared a lot while some stated that they were quite comfortable. Also, the patients with diabetes stated that they experienced a fear of being addicted to something when they were first informed about the diagnosis, and especially, were afraid of starting to use insulin at some point of time in the future. The individuals with diabetes stated that the major reason for them to fear about diabetes was the bad experience they had in the past. While the individuals with diabetes have concerns at the initial diagnosis which are attributable to their lack of knowledge, positive improvements were observed in respect of their concerns when they are fully informed about the disease.

Many people sometimes worry about their health; however, they suffer a lot in eliminating such worries, and fear that they may get a serious disease.[19] People stated in the study that they concealed the disease from their friends on ground of fear for using insulin or being an individual with diabetes.

The fear is a reaction given for the deliberately recognized and usually known external threat and danger which are caused by the emotions of an individual. The reaction of fear occurs since such thoughts contain the element of 'danger'. For this reason, people facing identical cases may react differently based on different thoughts. Hence, the person should feel to be in control of the situation, and question the accuracy of the mentality, invoking such feeling of fear. Persistence on the reasons of fear must be maintained in order to cope with fear and the issue defining the problem must be sorted out.[20]

Theme 2: 'Anger'

While the feeling of anger is least experienced in the study, the most significant question in self-questioning was 'Why me?'. The anger focus of the patients with diabetes is stated to be the closest or healthy people.

The results of the interviews held with the patients with diabetes exhibit that diagnosis of diabetes at young age is the cause of anger. They stated that such situation invoked in them the feeling of unhappiness by sometimes arousing the feeling of injustice and other times causing the fear of undergoing misfortunate incidents.

The individual may feel angry at his/her family or friends by thinking 'Why me?'[21]. In a study conducted for the purpose of determining the criteria of Type 2 diabetic individuals' adaptation to their disease and accepting such, it was stated that anger focus of the patients are family members, medical staff and other healthy people.[22]

Theme 3: 'Shock'

This theme is expressed in the study as 'I was shocked' and 'I felt really bad'. Besides patients who made themselves ready for the diagnosis due to the presence of an individual with diabetes in their family and who easily got over with the initial phase, there were patients who informed that they were shocked despite a diabetic member in their family. The individuals with diabetes who had no diabetic family member and were diagnosed with diabetes expressed that they experienced shock and confusion. In a study performed, individuals advised that the existence of an individual with diabetes in their family or in their friends, and knowing the life and

problems of an individual with diabetes may lead to perceive the disease with substantial pessimism and sadness.[23]

The attitude exhibited at the time when the person is told about diabetes diagnosis and the information relayed at such time is of great importance, and is one of the reasons for causing a shock. The way to inform about the disease is very important and the emotions felt at the time of initial diagnosis and the environment being in are still recalled despite lapse of many years. In a study giving rise to similar results, it is seen that a period of 10 years elapsed from the date of initial diagnosis in patients with the feeling of acceptance. In the same study, this result is interpreted as patients needing time until reaching acceptance and adaptation, and close monitoring and continuous training is required in order to reduce such duration.[22] An individual may feel various emotions, such as panic, shock and fear at the time of being informed about the disease. In case the medical staff share this information as though it is an ordinary case, the individual may not care about it and his/her adaption to the treatment may be affected negatively.[24]

Theme 4: 'Feeling of Guilt'

Freedman *et al.* advise that people get the feeling of guilt when they think that they have done something wrong.[25] The individuals with diabetes stated that they experienced a feeling of guilt for having done something wrong which they were aware of in hindsight. Some of the individuals with diabetes expressed the feeling of guilt for not having taken precautions. The most important reason for such a feeling of guilt is the lack of information on diabetes and their irregular living habits, and the feeling of sadness is one of the significant results in the study.

Theme 5: 'Sadness'

Individuals diagnosed with Type 2 diabetes at younger age are more influenced than those diagnosed with the same at older age. They expressed such emotions as 'I was so young'. Long exposure to chronic disease at younger ages brings in not only a feeling of weariness but also the concern of addiction.

Insufficient knowledge of individuals with diabetes in respect of diabetes was observed to bring in sadness and in turn, anxiety at the time of initial diagnosis. Some of the individuals interviewed were observed to experience sadness coupled with withdrawal. In a study, it is advised that such emotion may be benefited for positive objectives whereby sadness and frustration cause the energy of the individual being withdrawn, resulting in a kind of flow in the human body to give rise to a healing and thus, complicated negative emotions may be directed to render them acceptable.[26]

Theme 6: 'Denial'

At initial diagnosis, some of the patients are said to be in an effort of denying their status by trivializing their disease. One of the individuals with diabetes was observed to develop a significant defence mechanism in respect of the anxiety experienced, and expressed such emotion during the interview. The individuals with diabetes passing through such period stated that they refrain from telling others that they have diabetes. Furthermore, the diagnosis of diabetes may lead to psychological changes, including shyness and denial; it, in turn, causes an individual to lose self-respect which may then result in problems such as resistance and depression. Such problems experienced may prevent the patient from managing the disease in an effective manner.[27]

Individuals whom we interviewed could get out of state of denial and listlessness only when they encountered a complication. The individuals with diabetes stated that they have not complied with their diets and could not adapt to the disease initially due to the feeling of denial.

Theme 7: 'Unacceptance'

Another outstanding point with the individuals experiencing unacceptance is the fact that there is usually a period of 10–25 years since the diagnosis for such people. The lack of information was the major reason for lengthy acceptance duration. The result of lack of information makes us think that the individuals with diabetes need time until reaching to the stage of acceptance and adaptation, and close monitoring and continuous training is necessary in order to reduce such duration.

People accepting the disease re-established the necessary emotional balance in order to adapt to their daily life and cope with various problems. Accepting patients are aware of their disease and the treatment that needs to be applied, and they know of the restrictions and challenges that may exist.[23,28] It is not very easy to reach to the stage of acceptance, the individuals may accept the reality after passing through a lengthy period of anger and denial.[29]

Life with diabetes

Within this section, the 'Change in Comfort' is divided into two sub-groups, being positive and negative.

Change in comfort (positive)

Theme 1: 'Change of Habits'

The health practices constituting the quality of life consist of factors, such as dietary behaviour, self-realization, health responsibility, exercising habit and interpersonal support and stress management.[30] The individuals with diabetes try to cope with the symptoms of the disease by complying with a certain diet during the treatment on the one hand and their whole life and life standard are affected in trying to adapt themselves to the physical changes in their body on the other.[31] The individuals with diabetes in the study stated that they initially had a difficulty in similar routine practices such as diet and exercise, and their life standard had usually been affected positively in the course of time. From a study carried out for the purpose of identifying the relation between the health behaviour and happiness, it is inferred that perceived healthcare support, self-improvement, sufficient level of sleep, no smoking and having regular

breakfast each morning are factors directly effective with the increase in the feeling of happiness.[32]

The family members, peers and the opinion of the employees working in the medical field positively contribute to changes in the health behaviour in respect of protection and improvement of health, and to making such perpetual.[33]

Theme 2: 'Feeling Better'

It is known from the performed studies that in case of adaptation to the disease through acceptance of disease in individuals with diabetes, the individual feels happier and gets motivated, thinking that everything goes better.[32]

In order for the diabetic individual to look after himself/herself, he/she must be informed about the disease and his/her requirements. A diabetic individual informed about the healthcare requirements is more eager to assume his/her own care.[34]

Change in comfort (negative)

Theme 1: 'Adaptation Difficulty'

In chronic disease like diabetes, the individual must make changes in his/her life style and try to adapt to the treatment in order to improve his/her life and life quality. It is advised that for patients to make changes in their life style and adapt themselves to the disease is quite difficult.[35,36] In a study conducted with Type 2 patients with diabetes, it is observed that the patients do not comply with their dietary order, disrupt insulin treatment and cannot adapt to the disease due to the feeling of denial.[22] Supporting the patients in respect of accepting the disease in such a period through which they have to pass may improve their ability to adapt to the disease.

In a study by Nagelkerk *et al.* where the problems of Type 2 individuals with diabetes in disease management and the obstacles that they face are reviewed and examined, problems, such as lack of information, misunderstanding relating to the eating order specific to the disease, inability to apply customized care, frustration caused by the inability to secure glycaemic control and feeling of desperation, troubles experienced in the supply of drugs, difficulty in remembering taking pills and not knowing the side effects of the medications and how to use them, are reported.[37] For this reason, strengthening the patient will enable him/her to manage his/her disease and make changes in his/her life style.[38]

For an individual, being sick is the loss of being 'healthy'. Having a chronic disease entails an individual both to experience the feeling of loss for a long time and keep his/her life and disease under control.[39]

Theme 2: 'Professional Hardships'

While the chronic diseases and complications cause to decrease in the functional capacity of the individuals and working performance, social isolation, and spoil life quality, and have further adverse impacts on the life style and relations of a family.[11,40] The restrictions in the field of functionality on diabetic individuals, challenges encountered in the business life and loss of abilities are higher than common society.[41]

Theme 3: 'Social Challenges'

Some individuals with diabetes in the study stated that there are some challenges in social life caused by the compulsory change in life style.

The individuals with diabetes must live with the follow-up of blood sugar in their daily life, regular meals and exercise, and use of medication. Such practices impact their social adaptation and roles. Karadakovan and Aslan state that values and faith of the individual are affected by the business and entertainment life, existing environment and healthcare systems.[42] The chronic diseases and their complications cause a decrease in the functional capacity and working performance of the individual, and spoil the life quality and result in social isolation while adversely impacting the life style and relations of the family.[11,40]

Theme 4: 'Environmental Factors'

The individuals with diabetes advised that they have challenges in their eating order on ground of some mistaken practices and persistent behaviour caused by the social environment. The insufficient knowledge of society about diabetes and not knowing how to approach a patient were observed in another study as factors causing anger and fury even if the patient passes through the stage of denial.[22]

The most important factor for having challenges in the daily life due to environmental factors was observed to be incomplete information possessed by the people in the community and cultural factors.

Conclusion

The following conclusions are inferred from the study

It is inferred from the study that individuals with diabetes have misconceptions stemming out of lack of information when they meet diabetes, and feel fear and sadness, but accept diabetes somehow, and have adaptation difficulty when changing their life style, and their life experience is affected positively after having being informed thoroughly about the disease.

The practical inferences about the study are as follows

A sympathetic approach must be shown in order to facilitate the acceptance of diabetes and adaptation process by planning diabetic trainings in line with individual requirements. In this regard, we have re-reviewed and re-examined training plans in consideration of the life style, age, motivation, general health status, personal skills and treatment targets, and tried to strengthen the adaptation of the patients to diabetes.

References

1. The Society of Endocrinology and Metabolism of Turkey (TEMD): Diabetes Mellitus Study and Training Groups. Guide for the Diagnosis, Treatment and

Follow-up of Mellitus and Complications, 7. Edition, 2015. http://www.turkendokrin.org/files/7_DIYABET_Book%201_PRESS.pdf (accessed date 13 July 2015).
2. Kocaman N, Özkan M, Armay Z, Özkan S. A study of validity and reliability of Turkish adaptation of disease perception scale. Anadolu Psychiatry J. 2007;8:271–80.
3. Babadağlı B, Erim Ekiz S, Erdoğan S. Assessment of doctors' and nurses' communicational skills with the patients. Fırat Healthc Serv J. 2006;1 (3):52–69.
4. Özçakır A. Should the lesson of communication and clinic skills be given in medical education. Turkish Clin Med Sci J. 2002;22(2):185–9.
5. Erkuş A, Günlü E. Effects of emotional intelligence of transformation leadership. Dokuz Eylül Univ Fac Manage J. 2008;9(2):187–209.
6. Chilcot J. The importance of illness perception in end-stage renal disease: associations with psychosocial and clinical outcomes. Semin Dial. 2012;25 (1):59–64.
7. Polit DF, Beck CT. Essentials of nursing research. 6th ed. Philadelphia: Lippincott Williams & Wilkins; 2001.
8. Erdoğan S, Nahçıvan N, Esin N, editors. Research process application and critisism in nursing. Istanbul: Nobel Bookstores; 2014. p. 131–65.
9. Pitney WA, Parker J. Qualitative research in physical activity and the health professions. Leeds: Human Kinetics Pub; 2009.
10. Tuckett A. Qualitative research sampling: the very real complexities. Nurse Res. 2004;12(1):47–61.
11. Türkmen E. Chronic diseases and their importance. In: Durna Z, editor. Chronic disease and care. Istanbul: Nobel Tıp Bookstore; 2012. p. 37–49.
12. Koşar C, Büyükkaya Besen D. Patient activation in chronic diseases: conceptual analysis. Dokuz Eylül Univ Fac Nurs Electron J. 2015;8(1):45–51. Available from http://www.deuhyoedergi.org.
13. Jerant AF, von Friederichs-Fitzwater MM, Moore M. Patients' perceived barriers to active self-management of chronic conditions. Patient Educ Couns. 2005;57(3):300–7.
14. Deen D, Lu W, Rothstein D, Santana L, Gold M. Asking questions: the effect of a brief intervention in community health centers on patient activation. Patient Educ Couns. 2011;84:257–60.
15. Hibbard JH, Greene J. What the evidence shows about patient activation: better health outcomes and care experiences: fewer data on costs. Health Affairs. 2013;32(2):207–14.
16. Begum N, Donald M, Ozolins LZ, Dower J. Hospital admissions, emergency department utilisation and patient activation for self-management among people with diabetes. Diabetes Res Clin Pract. 2011;93:260–7.
17. Öztürk A, Altuntaş Y, Özsan M, Gündüz E. Investigation of the knowledge, attitudes, behaviors of chronic renal failure patients treated by hemodialysis on their illness and hemodialysis. Erciyes Edical J. 2009; 31(2):119–25.
18. Nam S, Chesla C, Stotts NA, Kroon L, Janson SL. Barriers to diabetes management: patient and provider factors. Diabetes Res Clin Pract. 2011;93 (1):1–9.
19. Hogan B. Coping with health anxiety. Improving Access to Psychological Therapies. 2010;1–24. Alındığı tarih: 30.09.2013.
20. Çelik S, Pınar R. Insulin injection and finger sticking fear in diabetic people. J Psychiatr Nurs. 2014;5(2):104–8.
21. Grimaldi A. The acceptance of the diabetic disease. Ann Endocrinol (Paris). 2003;64:22–6.
22. Demirtaş A, Albayrak N. Determination of adaptation and acceptance criteria of the Type 2 diabetic mellitus patients to their disease. Anatol J Clin Invest. 2009;3(1):10–8.
23. Lacroix A, Assal JP. The Therapeutic Education of Patients. Turkish Translation Editor: Piyal B, Tabak R.S, Ankara; 2003.
24. Kalender N, Sütçü Çiçek H. Obstacles for the management of chronic diseases. Turkey Clin J Nurs Sci. 2014;6(1):46–53.
25. Freedman J, Sears DO, Carlsmith JM. Social psychology Translated by Ali Dönmez. 2nd ed. Istanbul: İmge Bookstore; 1989.
26. Lewis M, Haviland-Jones JM, Barret LF. Handbook of emotions. New York: Guilford Press; 1993.
27. Olgun N, Ulupınar S. Strengthening and strengthening an individual with diabetes. 2014. http://www.tdhd.org/web_arsivi/diyabetli_bireyin_guclendirilmesi.pdf (Erişim Tarihi 16 July 2015).
28. Telford K, Kralik D, Koch T. Acceptance and denial: implications for people adapting to chronic illness: literature review. J Adv Nurs. 2006;55(4):457–64.
29. Körükçü Ö, Kukulu K. A program for protecting body-mind-soul integrity: stress reduction program based upon awareness. Curr Approach Psychiatry. 2015;7(1):68–80.
30. Tambağ H. Healthy life style behavior of students of Hatay healthcare college and effective factors. Fac Health Sci J. 2011;18(2):47–58.
31. Mittal SK, Ahern L, Flaster E, Maesaka JK, Fishbane S. Self-assessed physical and mental function of haemodialysis patients. Nephrol Dial Transplant. 2001;16(7):1387–94.
32. Peltzer K, Pengpid S. Subjective happiness and health behavior among a sample of university students in India. Soc Behav Personality Int J. 2013;41 (6):1045–56.
33. Pender NJ, Murdaugh CL, ve Parsons MA. Health promotion in nursing practice. Boston, MA: Pearson; 2011.
34. Türkcan DG, Çatalkaya D, Demir UD. Assessment of self-care strength of Type 2 diabetes mellitus patients. New Med J. 2009;26:210–3.
35. Ambigapathy R, Ambigapathy S, Ling HM. A knowledge, attitude and practice (Kap) study of diabetes mellitus among patients attending Klinik Kesihatan Seri Manjung. NCD Malaysia. 2003;2(2):6–16.
36. Ovayolu N, Parlar S, Karatas S. The importance of early diagnosis in patients achieving diabetes and hypertension and nursing training. Nurs Forum. 2003; 6(4):19–23.
37. Nagelkerk J, Reick K, Meengs L. Perceived barriers and effective strategies to diabetes self-management. J Adv Nurs. 2006;54(2):151–8.
38. Ovayolu Ö. Self-management in diabetes and effects of diabetes nurses. Nurs Forum. 2014;6(2):21–6.
39. Hjelm K, Mufunda E, Nambozi G, Kemp J. Preparing nurses to face the pandemic of diabetes mellitus: a literature review. J Adv Nurs. 2003;41:424–34.
40. Akdemir N, Akkuş Y. Rehabilitation and nursing care. Hacettepe Univ Nurs Care Acad Mag. 2006;13(1):82–91.
41. Camacho F, Anderson RT, Bell RA, Goff DC Jr, Duren-Winfield V, Doss DD, *et al.* Investigating correlates of health related quality of life in a low-income sample of patients with diabetes. Qual Life Res. 2002;11(8):783–96.
42. Karadakovan A, Eti Aslan F. Care in internal and surgical diseases. Adana: Nobel Tıp Bookstores; 2010. p. 99–111.