



Nutrition and Dietetics Concerning Diabetes Mellitus: Type 2 Diabetes Mellitus

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ABSTRACT

The nutrition care strategy and idea were developed by the Academy of Nutrition and Dietetics. Dietitians and nutritionists use it today all around the world after it developed and underwent changes. This essay aims to explain the nutrition and dietetic treatment approach with type 2 diabetes mellitus in mind. The technique can be used in many contexts, such as clinical dietetics and public health. Although the case studies in this article focus on the model and procedure used by dietitians in Pakistan, the Pakistan Nutrition and Dietetic Society model and procedure can also be used in conjunction with other models and procedures. The model starts with determining nutritional needs and moves through six stages: assessment, determination of the nutrition and dietetic diagnosis, planning of the nutrition and dietetic intervention, implementation, monitoring, and review of the intervention, and evaluation of the intervention. The difficulties facing nutritional and dietetic professionals are in preventing and reducing the impact of nutrition-related health problems in individuals or groups of people. Dietitians and nutritionists must shift from practice that is based on experience to practice that is based on evidence, demonstrate quality, and maximize nutritional outcomes.

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1. INTRODUCTION

The process of dietetic and nutrition practice revolves around assessment, which is a critical component (Dorner, 2010; Satia-About *et al.*, 2002; Spronk *et al.*, 2014; Diekman *et al.*, 2023; Subar *et al.*, 2015; Ahsan, 2022). The assessment, according to the World Health Organization (WHO), is a systematic procedure for gathering and examining data to make decisions about the nature and root causes of nutrition-related health issues that affect an individual, a group, or a community (Buyken *et al.*, 2018; Lacey & Pritchett, 2003). It is essential in developing outcome measures to evaluate and track the intervention. It is the basis for nutrition and dietetic diagnosis and intervention.

The goal of this study was to investigate a case study for dietetics and nutrition concerning type 2 diabetes mellitus.

2. METHODS

The format used in this study was created to organize and standardized dietetic and nutritional assessment. Depending on the situation, such as individual, group, community, or population, different information is gathered during the assessment, and different instruments are utilized to gather this information. The foundation of the nutrition and dietetic assessment is determining how well nutritional needs are being satisfied. Assessing current food and drink intake, changes in the length and intensity of appetite, and factors that influence intake are typically essential. In clinical settings, it may also be crucial to take recent changes in meal schedules, food preferences, and consistency into account.

The setting, population, age, level of literacy, training, and experience of the assessors, cost, the nutrients to be looked at, and other factors will all have an impact on the sort of nutritional assessment that is utilized. It is essential to comprehend the restrictions and applicability of each technique to ensure the most appropriate approach in clinical and other contexts. The evaluation could be either recent or old. It's important to measure or weigh the food and drinks consumed. Photographs, models, and typical serving containers can all be used to help with quantification. Dietary data are most frequently used statistically in clinical practice, while they can also be used subjectively to examine dietary preferences or meal patterns.

Data on food composition is used to calculate the calorie and nutrient content of a diet. In most cases, a software tool is used to simplify these computations. But it is crucial to recognize the limitations of information on food composition. All nutritional assessment findings must be interpreted in light of the demands of the person or population. This is frequently done by making comparisons with dietary reference values published by the Institute of Medicine in Pakistan, the Department of Health in Pakistan, or dietary recommendations. However, any nutritional reference value must be viewed within its bounds.

3. RESULTS AND DISCUSSION

3.1. Initial data

Hadia Khan (pseudonym), 50, is of Northern Pakistani heritage and was diagnosed with type 2 diabetes at the age of 38. She has hypertension and dyslipidemia and was recently diagnosed with peripheral neuropathy and diabetic retinopathy. Hadia Khan, an office administrator, is a divorcee who lives alone. She cannot drive and must consequently rely on public transportation or walk. She wanted to reduce weight and spoke to her doctor about it. The doctor expressed concern about her poor diabetes management and advised her to pay

more attention to her health. She consulted a dietician when she was first diagnosed. She had previously participated in a diabetic education group session and had tried commercial slimming clubs. She didn't get much out of the diabetic group. She dreaded going to groups because she didn't appreciate being told she was overweight in front of the other members. Her Physician advised a private referral to a nutritionist for personal and thorough assistance because she stated that she was willing to pay for the required support and advice. Hadia Khan was pleased with this proposal and scheduled a consultation with a freelance nutritionist. Detailed information for the initial assessment is shown in **Table 1**.

Table 1. Initial data of the patient.

Data	Information
Anthropometric, hematological, and biochemical Measures	Current Weight 89 kg Height 1.62 m WC 89cm RBG 15 mmol/L Total cholesterol 6 mmol/L BMI= Obese HTN 150/90 mmHg Medication Metformin 1000 mg/bd Bendroflumethiazide 12.5 mg/d Ramipril 10 mg/d
Diet	Diet 24-hour recall mid-week Breakfast one Egg + Pratha Morning Snack Biscuits (30g) Lunch ½ Roti (80g), Vegetables Salad with Spices dried fruit bar (28 g) Mid-afternoon 3 digestive biscuits 50g) Supper Snacks Dinner Cakes (25 g each), biscuits (11–20 g each), Pizza Drinks Fruit juice (180 mL), tea with sugar (10 g per cup) Housewife Shops weekly (supermarket for fruits/vegetables, bakery, kosher grocery shop, butcher)
Environmental and behavioral Aspects	Works at home looking after her family and home Educated to High School level, Married Never Smoked or Drink alcohol Does not do any formal exercise

3.2. Several points for assessment: Question/ Answers

The questions and answers are the following:

- (i) Is the care pathway Different from the pathway of the IHS care plan? This pathway is privately funded by the client and not paid for by the NHS. In addition, for clinical competence, freelance dietitians need good business skills. Fees must reflect overheads such as room hire, travel, time, CPD, insurance, and other professional fees. The

Freelance Dietitians Group (FDG) of the BDA provides members with guidance on all aspects of setting up a private practice, including charging fees.

- (ii) What is the dietetic Diagnosis? As evidenced by her weight and glycosylated hemoglobin (signs/symptoms), Hadia Khan has an excessive energy intake (problem) due to a lack of activity and food consumption (etiology)...
- (iii) Are you going to take self-referrals from Hadia Khan? Dietitians can accept self-referrals for medical concerns if a diagnosis has been made and adequate background information is available. Given the complication of Hadia Khan's conditions (type 2 diabetes, hyperlipidemia, and hypertension), a medical diagnosis, as in this case, is the most prudent course of action.
- (iv) What is the explanation of the accuracy of the information provided and what information is required for plans? Assuming that the doctor's information is correct. At the initial appointment, anthropometric measures (weight, height, and BMI) should be redone.
- (v) Consider when the measures were taken by the doctor. Is there any significant change throughout this period? Did the blood tests take place during the previous three months? Is the patient monitoring himself? What are the outcomes? It is terrible that there was initially no information about medicines. You must be aware of the oral drugs provided for all of her diseases, as well as if she is on insulin. Are all meds taken as directed? Can the patient be trusted to provide correct information, or should the Physician be contacted? It is necessary to provide a diet history. There might be a 24-hour recall during the appointment or a 3-day food diary completed in advance. Since this lady is Afro-Caribbean, we cannot presume she eats Northern Pakistan food. There is little information available on the client's environmental, cultural, and social circumstances. It is critical to comprehend the client's way of life. As a freelance dietician, it is beneficial to acquire more information before the initial session, especially when dealing with self-referrals. This can be done over the phone, by email, or in person.
- (vi) Is it necessary to obtain consent from her before her GP? Even if she was recommended by her Doctor, it is still necessary to obtain the client's permission before sharing or requesting information, such as a summary letter or a request for more medical information. Unauthorized interaction, particularly with self-referred patients, might be interpreted as a breach of confidentiality. Preparing a summary of your consultation for your doctor is more than simply a formality. It allows other healthcare providers to reiterate critical points. It also promotes your services. Providing a copy to the patient provides them with a clear description of what was agreed upon in the treatment plan with you...
- (vii) Hadia Khan has private insurance which is not sufficient to bear consultation. What will you advise her? Dietetics private medical insurance is often confined to people referred by a medical expert and limited to two or three consultations. Several insurance covers will only cover urgent issues or diagnoses. Type 2 diabetes is a chronic ailment, and Hadia Khan was diagnosed with it 12 years ago. If patients want to pay for their consultation with medical insurance, they should be urged to contact their insurance provider ahead of time to acquire authorization. After that, the nutritionist will bill the insurance company. If an authorization number is not available, the dietician must make it clear that the patient will be billed. The patient may choose not to attend the appointment. The patient came at the GP's recommendation, yet she is willing to pay, implying a legitimate incentive. Determine why she did not participate in previous interventions.

Taking this into consideration, as well as her reasons for accepting the private referral will provide insight into the patient's expectations and aid in proper planning...

- (viii) How would you meet the expectations of client Service? The patient would anticipate thorough, personalized guidance that she has not before received. Before the consultation, the fees should be negotiated. Clarify explicitly what they cover and do not cover. Fee scales in writing might be useful. Can you give me a discount if I pay in advance for a consultation package? Verify with the customer to see whether they are willing to accept this. Consider including a formal agreement with a signed registration form...
- (ix) How do you ensure you are meeting the National Health Council Standards? You require strong, concise responses, particularly addressing prospective expenditures. Understand your limitations and do not be ashamed to confess when you need to double-check a fact before responding. All dietitians must participate in CPD/Life Long Learning. Freelance dietitians frequently operate alone and must perform well. Remember that you must acquire both commercial and clinical abilities. The IHS guidelines are intended to safeguard the client. Working inside it reduces risk, but freelance dietitians must still maintain proper professional indemnity, public liability insurance, and data protection registration...
- (x) How do you ensure record keeping? Records of the consultation and any other correspondence with the client should be kept, just as they would in an NHS context. For recordkeeping and record keeping, refer to the NIFSAT Standards of Conduct, Performance, and Ethics, as well as the HCPC Standards of Proficiency and the NIFSAT Process for Nutrition and Dietetic Practice, as supported by NIFSAT Guidelines for Dietitians. Then, for data protection, register with the Information Commissioner's Office (ICO). • Create your own or purchase from others. While creating your own, it is best to get a peer evaluation from a colleague. You should not utilize resources from the NIFSAT dietetic department without permission, payment, and acknowledgment.
- (xi) What resources will be provided by you? There are many sources of reliable leaflets such as NDA, PDS food facts, UHS specialist groups, and Diabetes Pakistan.
- (xii) Reason to establish a private referral with Hadia Khan? Provide your contact information on any materials you send to clients. Obtaining this information before the initial session can aid in the design of your nutrition and dietetic intervention. Ensure that expectations are realistic and within the Professional code of practice. The patient's budget might be a constraint. Long-term NHS monitoring and treatment will be necessary for chronic conditions such as diabetes. The freelance dietitian owes it to the patient to make them aware of this and to encourage them to re-engage with suitable IHS treatment routes...
- (xiii) Are there any advantages for freelance dietitians? The freelance dietitian has the benefit of being outside of the traditional treatment pathway and may be regarded as offering a fresh start. Paying for the service might significantly boost motivation. The patient may benefit greatly from the impression that they are receiving highly personalized treatment. There are other more direct channels of contact. There is potential for monitoring and follow-up via multiple channels such as phone, email, or Skype. Reasons may be entirely practical, such as clinic location or schedule. Hadia Khan has poorly managed diabetes and will require ongoing monitoring and assistance for the rest of her life, which private insurance would not cover (chronic illness management exclusions), and the patient may not be able to self-fund for an extended, or life-long time. The freelance dietitian has a duty of care in a limited number of consultations (perhaps two or three) not only to inspire and re-educate patients to better manage their diabetes but also to urge them to work more closely with their GP and IHS diabetes services...

- (xiv) How can a freelance dietitian assist in long-term care plans? This case study demonstrates the advantages of having a freelance dietitian supplement the conventional NHS care paths. Dietetic care process components are common to all dietetic interventions, whether NHS and private, and include the following: Nutrition and dietetic diagnosis identification, develop a nutrition/dietetic intervention plan, nutrition/dietetic intervention should be implemented, remember to monitor and review (just as in the HIS), and evaluate and improve your service.

4. CONCLUSION

This essay is a review of a case study on dietetics and nutrition concerning type 2 diabetes mellitus. This essay clarified a case study, together with a question and answer section and preliminary patient data. This study may serve as a medical therapy guide for those who have diabetes.

5. AUTHORS' NOTE

The authors declare that there is no conflict of interest regarding the publication of this article. Authors confirmed that the paper was free of plagiarism.

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