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Chapter 6

Adapted cardiac rehabilitation programme to
improve uptake in patients of Moroccan and
Turkish origin in The Netherlands:
A qualitative study

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Submitted

Abstract

Background

Non-native patients who participated in a cardiac rehabilitation programme at a Dutch rehabilitation centre had more difficulties to achieve the treatment aims than native Dutch patients. Therefore an adapted programme for non-native patients, lacking proficiency in Dutch, has been instigated. The programme contains six adapted treatment modules and additional strategies: adapted education regarding (1) the heart and the vascular system and (2) regarding the use of healthy food, with use of (audio) visual educational materials, (3) adapted physical exercise module with explicit involvement of the patients' relatives, (4) standard use of professional interpreters, (5) increase in the number and length of consultations, and (6) individual treatment instead of a group programme.

Objective

To explore the treatment experiences in patients of Moroccan and Turkish origin and their rehabilitation therapists regarding an adapted cardiac rehabilitation programme.

Methods

Semi-structured, face to face interviews were conducted with eight patients of Moroccan and Turkish origin and five native Dutch rehabilitation therapists at a rehabilitation centre in Amsterdam, The Netherlands. As comparison three native Dutch patients were interviewed regarding the regular programme.

Results

The results indicate that the patients' disease symptoms diminished and that patients adopted lifestyle changes. Therapists experienced that the number and length of the consultations, the structural use of interpreters and (audio) visual educational materials contributed to the achievement of the treatment aims.

Conclusion

An adapted cardiac rehabilitation programme with separate modules and additional strategies for non-native patients appears to lead to satisfied patients who adopted lifestyle changes.

Introduction

Patients who have been through a coronary event, such as an acute myocardial infarction can benefit from a multidisciplinary cardiac rehabilitation programme (1;2), aimed at physical and psychological recovery and secondary prevention. Former research on the uptake and adherence of cardiac rehabilitation treatment regarding lifestyle changes shows that it is challenging for patients to adjust existing health behaviour and to implement these behavioural changes in daily life (3;4).

Changes in health behaviour depend on intrapersonal, social and physical environmental factors (5;6). One of the preconditions to accomplish lifestyle changes is to have knowledge of the health related benefits of those changes. Lifestyle changes in persons with a lower socioeconomic status, and often a limited educational background, seem to be difficult to accomplish (7-9). Because many non-native patients in The Netherlands received limited education and are socially and economically disadvantaged (10) lifestyle changes might be difficult to accomplish. This might be due to the fact that patients of non-native origin face language difficulties (11) and limited proto-professionalism (12). Proto-professionalism refers to the process whereby patients gain more knowledge of causes and treatment of diseases and develop a view on cause and treatment of symptoms: this process takes place through education and easily accessible popular medical information by television, magazines and internet (13;14). This process of proto-professionalism appears to develop differently in patients of non-Dutch origin, which is potentially influenced by a lack of proficiency in the Dutch language and being brought up in a different (cultural) context and healthcare system.

According to Kleinman, uptake of and adherence to treatment is influenced by beliefs and behaviour of patients regarding their illness event, the diagnosis and treatment of the illness. Patients' beliefs regarding illness and treatment are incorporated into a personal explanatory belief model, which influences the understanding and subsequent use of healthcare programmes (15;16). To improve the adherence to rehabilitation treatment the explanatory model of the patient and health providers need to match.

In the rehabilitation centre where the present study has been conducted non-native patients, most with a lack of proficiency in Dutch, had more difficulties to achieve the treatment aims than native patients. The patients' physical complaints did not decrease and the methods to manage cardiac risk factors such as regular physical exercise and the consumption of healthy food were not applied after completion of the rehabilitation

programme. To improve uptake, an adapted cardiac programme for non-native patients has been instigated. The aim is to improve patient participation in treatment, reduce physical complaints and improve the maintenance of healthy living habits after completion of the programme. The adapted multidisciplinary cardiac programme contains six adapted treatment modules and additional strategies for non-native patients, which are described in the methods section.

This study aimed to explore treatment experiences in patients from Moroccan and Turkish origin regarding the adapted cardiac rehabilitation programme. Patients and their therapists were interviewed on the course and content of the adapted programme. As comparison native Dutch patients were interviewed regarding the regular rehabilitation programme.

Methodology

Design

A qualitative research method was used to explore notions and beliefs of patients and rehabilitation therapists regarding the adapted cardiac rehabilitation programme. The study was approved by the Medical Ethics Committee of VU University Medical Centre in Amsterdam.

Participants

Participants (N=11) consisted of patients of Turkish (N=4), Moroccan (N=4) and Dutch origin (N=3), and native Dutch physical therapists and social workers (N=5). Patients were recruited from the patient population that applied for rehabilitation treatment because of their heart disease.

Inclusion criteria were: (1) (a) born in Turkey or Morocco and at least one parent born in the same country; or born in The Netherlands and both parents born in Turkey or Morocco; (b) native Dutch. (2) Coronary artery disease (e.g. status after myocardial infarction, percutaneous angioplasty or bypass) or other (congenital) cardiac disease. (3) Age ≥ 18 . (4) Written informed consent.

This study focused on patients of Turkish and Moroccan origin because these patients belong to the largest groups of non-native patients in The Netherlands. Although there are cultural differences between the two subgroups of patients, the groups were too small to be presented separately. Despite the cultural differences, there are many

similarities between the groups regarding their socio economic circumstances and migration history. Persons from Moroccan and Turkish background in The Netherlands, who belong to the first generation labour migrants or migrated due to family reunification, in many cases received limited education, have a comparable lower position on the Dutch labour market and live in the more deprived areas of larger cities such as Amsterdam, the capital of The Netherlands, where this study was conducted (10).

Potential participants were identified by surnames of Turkish, Moroccan or Dutch origin, and their origin was verified during the first consultation with the social worker. All patients of Turkish and Moroccan origin who started rehabilitation treatment in the inclusion period of this present study were included. The first three native Dutch patients who started treatment were asked to participate. Patients were informed by an information letter in their mother language and in Dutch. Subsequently consent was obtained. Five rehabilitation therapists, consulted by the included patients, participated in the study. Three of them were physical therapist and two were social worker.

An overview of the patients' characteristics is given in table 1. The patients had a mean age of 56 years, ranging from 38-69 (SD 8.3). The mean duration of residence in The Netherlands was 29 years, ranging from 14-37 (SD 8.1). Two patients received no education, five primary, two secondary and two higher education. Nine patients were male and two female.

Adapted and regular cardiac rehabilitation programme

The adapted cardiac rehabilitation programme contains six adapted treatment modules and additional strategies: (1) an adapted educational module regarding the heart and the vascular system, the origin of the cardiac disease and possible lifestyle changes, and risk factors such as food and smoking. The therapists involved make use of a video, which has been developed by the Dutch Heart Foundation (in Dutch and in the Moroccan Arabic language), an anatomical model of the human body, and an educational picture book regarding the human body and its organs. The aim of this module is that patients learn to understand these topics and include them in their explanatory model on the origin and treatment of their disease, (2) an adapted educational module regarding the use of healthy food. The therapists involved make use of a picture book (developed by the Dutch Heart Foundation) with specific pictures of non-native food and specific eating habits of non-native patients, (3) an adapted module regarding the necessity of regular physical exercise and the continuation of this exercise after completion of the cardiac programme. Furthermore the aim is to reduce fear in the patients' relatives and promote confidence

Adapted cardiac rehabilitation

in the physical ability of the patient, therefore the patients' relatives are explicitly invited (orally through the patient) to attend this module, (4) regular use of professional interpreters (mostly physically present or on occasion by phone) during all treatment modules. Professional interpreters are subsidized by the Dutch authority, (5) use of more or longer consultations to explore patients' beliefs regarding their disease and to explain the origin of the disease and its treatment, and (6) in contrast with the regular programme, individual rehabilitation treatment is applied. This is necessary because most patients do not speak the same language as the other patients. Furthermore, the therapists are more able to focus on the individual treatment aims of patients. The regular programme consists of: educational modules regarding the heart and the vascular system, the origin of the cardiac disease and possible lifestyle changes, risk factors such as food and smoking, stress management, physical exercise, relaxation techniques, and social aspects of having a cardiac disease. Also, individual consultations with the social worker and psychologist, and education by a cardiologist were part of the programme.

Data collection

Semi-structured interviews were held by the executive researcher (MS). Patients and rehabilitation therapists were interviewed once at the rehabilitation centre at the end of the completed cardiac rehabilitation programme. These interviews focused on the course and content of the consultations. Ten patients gave their approval to record the interview. One patient did not want the interview to be recorded, therefore notes were taken and verified with the patient thoroughly at the end of the interview. All therapist' interviews were recorded. Six non-native patients agreed to use a professional interpreter, two non-native patients thought themselves proficient enough in Dutch. Different professional interpreters were used.

An ethnographic interview style was used (17;18). The interviews were structured on the basis of a topic list (19). The topic list was regularly evaluated, based on the information revealed by the already administered interviews. The major subjects of the topic list were: patient-provider interaction, explanatory model of the patient and therapist on health and illness, organization of the rehabilitation programme, role of the relatives in treatment, lifestyle changes, outcome satisfaction, demographic data and personal information.

Table 1: Patients' characteristics

| Nr. | Sex | Country of birth | Age | Years of residence | Language* proficiency | Education | Spouse | Children | Profession | Medical treatment |
|-----|-----|------------------|-----|--------------------|-----------------------|-----------|---------|----------|-----------------------------|------------------------|
| 1 | M | Morocco | 49 | 33 | well | primary | wife | yes | Cleaner | Angioplasty |
| 2 | M | Morocco | 65 | 34 | poor | primary | wife | yes | Disablement Insurance Act | Angioplasty |
| 3 | M | Morocco | 38 | 13 | good | higher | none | none | Snack bar employee | Angioplasty |
| 4 | M | Netherlands | 46 | n/a | n/a | primary | wife | yes | Security guard | Angioplasty |
| 5 | M | Turkey | 69 | 36 | poor | primary | wife | yes | Disablement Insurance Act | Angioplasty/ bypass |
| 6 | M | Turkey | 60 | 33 | poor | secondary | wife | yes | Sickness leave | Bypass |
| 7 | F | Morocco | 57 | 19 | poor | none | husband | yes | Housewife | Angioplasty |
| 8 | M | Netherlands | 57 | n/a | n/a | secondary | wife | yes | Musician/caregiver | Angioplasty |
| 9 | M | Netherlands | 60 | n/a | n/a | higher | wife | yes | Veterinary assistant | Angioplasty/ bypass |
| 10 | F | Turkey | 58 | 27 | poor | none | husband | yes | Disablement Insurance Act | Angioplasty/ bypass |
| 11 | M | Turkey | 55 | 37 | poor | primary | wife | yes | Retired construction worker | Bypass |

n/a=not applicable, * =Dutch

Data analysis

From the start of the data collection an initial analysis was done to adjust the topics of the subsequent interviews. This interactive process of data collection and analysis is typical for ethnographic research (17;20;21). For further analyses of the interview data the verbatim transcription of recorded interviews were used. The raw data were analysed by the executive researcher (MS) and the qualitative researcher (EB) by using a code scheme, and this primary analysis was discussed with the other researchers. Afterwards the main themes were identified and agreed upon by all authors. The final analysis and presentation was prepared by MS and thoroughly discussed with JD. This final analysis and presentation was verified and agreed by all authors.

The interviews were analysed using the method of constant comparison (22;23), which is based on the inductive grounded theory method and characterized by a continual interplay between data collection and analysis to produce a theory (23). The following steps were used: (1) Categorising: The text of the interview reports were categorized into text segments, according to the subjects of the topic list or new important subjects. (2) Coding: Coding was done by labelling text fragments with a code (a keyword), which symbolized the content of the fragment. (3) Comparing: Text fragments that had the same code were compared, to synchronize what each code implied. Firstly, text fragments with the same code contained in one single interview were compared. Secondly, text fragments with the same code in different interviews involving the same group (i.e. patients or therapists) were compared. Thirdly, text fragments with the same code in different interviews involving different groups (i.e. patients or therapists) were compared. (4) Determining: The relation between different ideas was determined by comparing ideas with the existing literature and theoretical conceptions of those ideas.

With regard to the quality indicators of the data analysis: Dependability and confirmability were achieved by including multiple researchers (analyst triangulation) in the study, especially in the process of analysing the data, as described above. Furthermore, representative quotes are used to describe the experiences of patients with regard to the different themes to enhance the possibility for other researchers to judge the transferability of the findings.

Results

Explanatory model on the cardiac disease and its treatment

Almost all non-native patients knew the origin of their health complaint and their beliefs were similar to each other, namely, the blood vessels had become blocked and they had received an angioplasty, or a bypass with blood vessels from their legs. There were, of course, some differences in the manner they elaborated on this subject and how much knowledge they had.

Patient-5: 'I had twice an angioplasty and it did not work sufficiently, my vein still was [obstructed]. So they said you need a bypass surgery, they removed veins from my legs and they placed them in my heart'.

Patients mentioned smoking, fatty foods, diabetes, overweight, high cholesterol level, stress and genetic influences as potential reasons for the development of their heart disease.

Therapists reported that taking more time to explore the patient' health beliefs and using interpreters more frequently improves the understanding of the patients' explanatory model of their disease. This offers the opportunity to adapt treatment to the individual patient. The use of an educational video, in the Moroccan Arabic language, about the origin of heart diseases and lifestyles changes, and an educational book with pictures of the human body and its organs contributed to a better understanding of the disease by the patient.

Therapist-4: '[To have] some additional personal attention and time during the intake procedure [] and the extra time to explain patients how the human body functions.....what the function of the heart is [works well with these patients]...non-native patients more often have limited knowledge on how their body functions. The anatomical education lesson, which we give, is clarifying for these patients'.

Native Dutch patients showed similar levels of knowledge regarding the origin of their health complaint.

Physical activity

The majority of the non-native patients in general were not used to regular physical exercise or sports before the onset of their heart disease. All non-native patients made changes in their daily physical exercise according to the advice of the rehabilitation

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treatment team. For example, some patients started to walk to the shopping centre more often. Another patient bought a home trainer to practice at home and another went to a fitness programme for women of non-native origin. Patients seemed to have learned and experienced the positive effects of physical exercise.

Patient -11: 'I experience that sport is important, because when I feel tired and I do some [physical exercise] and I sweat, and then I feel better and stronger'

Non-native patients appeared to have difficulties with staying physically active after completing the treatment programme. Half of the non-native patients reported they hoped that the physical exercise modules would have lasted longer in order to be able to continue with the sports activities as they had done during treatment. They argued that the sport or fitness centres in their living environment were not of the same quality as the fitness programme in the rehabilitation centre due to a lack of suitable sports equipment and a lack of attention from a professional therapist.

Patient-6: '[The therapists] told me there was a sports centre in North Amsterdam and I went there, but there were all elderly people and a little bit [disabled]. I did not like that environment. So I said: what I am able to do there, I can also do at home'.

Staying physically active appeared to be negatively influenced by long holidays in the patient's country of origin. Almost all non-native patients went to their country of origin for several weeks or months after they had completed their rehabilitation programme. Therefore, continuation of their sport and physical exercise was postponed for some time.

Therapists reported that some non-native patients had difficulties with the continuation of physical exercise due to the lack of suitable facilities (e.g. sport or fitness centre suitable for persons of the same non-native origin speaking the same language) and a limited financial budget.

Native Dutch patients reported to have no problems with the continuation of sports or physical exercise. Support from family members seemed to influence their level of physical activity positively.

Food pattern

The majority of the non-native patients reported that they changed some aspects of their daily habits concerning food and smoking. Patients diminished the use of sugar in tea and coffee, sweets, and food with a high percentage of fat. All patients who had smoked previously reported they gave up smoking. For some non-native patients changes in food patterns seemed difficult to accomplish, especially in situations with social pressure.

Patient-5: 'In Turkey, I did not pay attention to what I was eating; I do not have the control there. I am not allowed to eat so much fat, which is what they told me. That is what I pay attention to and I try not to eat much salt. I try to eat according to the advice they gave me. Now and then, when I am somewhere else, then I am allowed to eat. They bring a pastry and when they offer me that, I will not say no'.

One native Dutch patient also reported that changing daily eating habits is complicated, such as eating when you are bored.

Role of relatives

From half of the non-native patients the relatives have not been present at the (educational) modules in the rehabilitation centre. Almost half of the relatives involved appeared to have a role as a coach for their family members, regarding the adoption of lifestyle changes.

Patient-7: 'My husband usually came with me. He also heard the explanation about the function of the heart. My children are informed about my complaints they explain me the given information and advised me to not stop doing sportsto absolutely stick to that.

Therapists reported it was difficult to involve relatives of non-native patients in treatment, which might have led to a limited influence on the development and maintenance of lifestyle changes.

Reasons for limited attendance of relatives of native Dutch patients appeared to be that patients did not want their relatives to be present (because they were of the opinion that it was their individual rehabilitation process), relatives had little time available, and spouses were embarrassed to talk about personal issues.

Communication and help seeking behaviour

All non-native patients appeared satisfied regarding the communication with the treatment team, especially with the frequency of the use of interpreters.

Patient-6: 'Sometimes something was explained and I did not understand it. I asked it again and then an interpreter on the phone was arranged and it was explained to me'.

In contrast to the patients, the therapists reported also disadvantages of using interpreters (e.g. lack of empathy of the interpreter, the interpreter being in a rush and the fact that information is translated only once at one moment in time). Some therapists reported non-native patients communicated less directly, possibly due to the politeness of these patients.

Therapist-4: 'Patients like [patient-11] are not so direct in their communication. They don't want to offend you. They present it in a very different way. We try to find out the underlying reasons of their behaviour and to [unravel] those reasons'.

Native Dutch patients appeared satisfied regarding the communication with the treatment team.

Outcome satisfaction

In general non-native patients were satisfied with the adapted rehabilitation programme especially with the sports modules (except the length) and with the professionalism of the therapists. All non-native patients reported their physical complaints had diminished or disappeared after completion of the programme. Patients reported reduction of fear, increasing level of energy, improvements in physical condition, more self-confidence, and more desire for life.

Therapists reported the adapted programme for non-Dutch speaking non-native patients was an improvement. However, there was still reason to further improve the adoption of lifestyle changes.

Native Dutch patients were satisfied with the regular rehabilitation programme and reported their physical complaints had diminished or disappeared after the end of the programme.

Discussion

This study indicates that the adaptations of the cardiac rehabilitation programme, aimed at more appropriate care for non-native patients, lead to satisfied patients who showed understanding of their disease and adopted lifestyle changes to prevent a relapse.

Non-native patients in the present study had basic knowledge of their heart disease and treatment of it, and were able to reproduce this information during the interviews. This is an important finding, which seems to reflect the successful uptake of knowledge of patients during the rehabilitation programme. Therapists implied that the use of more or longer consultations, professional interpreters, and (audio) visual educational materials helped the patients to better understand the origin of their disease and the necessity of lifestyle changes. The results of the present study suggest that taking part in an adapted cardiac rehabilitation programme contributes to the process of proto-professionalism. By this process of proto-professionalism the patients' explanatory model (15;16) regarding the treatment of heart diseases increasingly matches with the model of the care providers, which influences a more successful uptake and adherence to rehabilitation treatment.

The present study indicates that non-native patients were able to accomplish lifestyle changes such as smoking cessation and a reduction of the amount of fat and sugar in daily food. Because accomplishment of lifestyle changes is difficult (3;4), the findings regarding lifestyle changes seem promising. Patients potentially were able to do this because they understood the origin of their cardiac disease and the necessity of lifestyle changes to prevent a future relapse. In contrast, changing towards more physical activity in daily life appeared to be difficult for non-native patients. Other studies in patients with heart diseases have shown that in general lifestyle changes regarding physical activity are more difficult to accomplish for patients than other changes (e.g. the usage of salt) (24;25). The present study suggests that for non-native patients it is difficult to improve the level of physical activity, which is influenced by long holiday periods in the country of origin and a lack of suitable sport facilities. Furthermore, many older non-native patients, especially women, have not been educated in physical exercise or sports and being physical active is therefore less common for them (26;27). A lack of former experience with physical exercise potentially influenced the limited increase in physical activity in these patients. In conclusion, further research is needed regarding the promotion and implementation of a higher level of physical activity in non-native patients.

Almost half of the relatives of the non-native patients were involved in the treatment programme and some were able to support the patients with the adoption of lifestyle changes. Nevertheless, the treatment team seemed unable to involve all relatives of non-native patients in treatment. This finding is in contrast with the assumption that relatives of non-native patients are more active in taking care of ill family members, than native-Dutch patients (28;29). Other studies in rehabilitation programmes reported minimal involvement of relatives in treatment too (29;30). However, social support has been found to be associated with a higher level of self-care e.g. regarding to dietary recommendations (31-33). If relatives are not involved and do not obtain knowledge of necessary lifestyle changes this may act as a barrier for developing healthy behaviour for the patient (34). Therefore more involvement of family members in the process of lifestyle changes is recommended in clinical practice.

An interesting result is the finding that all patients appeared to be satisfied regarding the communication with the members of the cardiac treatment team. Patients were satisfied with the frequency of using professional interpreters and the possibility to ask for further explanation if they did not understand. It is remarkable that the non-native patients, who lacked proficiency in Dutch, were rather satisfied with the communication. Patients might be prohibited to ask questions or give comments to their therapists due to their shame for a limited language proficiency (35). Besides the advantages, therapists mentioned some obstacles regarding the use of professional interpreters. Therapists are advised to learn to work with professional interpreters and to be satisfied with its possibilities to reduce the communication problems.

Due to practical limitations the sample size of this present study was small, this potentially influenced the reliability of the study. In addition, despite careful methodological consideration to enhance the validity and reliability of the study bias is possible. Issues that may have affected the data collection and data analyses are the personal characteristics of the researcher such as gender (male), origin (native Dutch) and personality. Future quantitative research is needed to verify what the effect of the realised adaptations is on the treatment outcome in non-native patients.

Conclusion

An adapted cardiac rehabilitation programme with separate modules and additional strategies for non-native patients appears to lead to satisfied patients who adopted lifestyle changes. More improvements in the continuation of physical exercise after

completion of the programme and a larger role of the patient's relatives regarding the adoption of lifestyle changes are needed.

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