Patient Education and Counseling 95 (2014) 231–237

Contents lists available at ScienceDirect

Patient Education and Counseling

journal homepage: www.elsevier.com/locate/pateducou

Intervention

Evaluation of the effect of motivational interviewing counselling on hypertension care

Chunhua Ma [a,*], Ying Zhou [a], Wei Zhou [a], Chunfeng Huang [b]

[a] School of Nursing, Guangzhou Medical University, Guangzhou, China
[b] The First Affiliated Hospital of SUN YAT-SEN University, Guangzhou, China

ARTICLE INFO

Article history:
Received 25 July 2013
Received in revised form 3 January 2014
Accepted 18 January 2014

Keywords:
Motivational interviewing
Treatment adherence
Hypertension
Nursing care

ABSTRACT

Objective: This study tests the effectiveness of motivational interviewing compared with the usual care for Chinese hypertensive patients.
Methods: A randomised controlled trial was used. One hundred and twenty eligible participants were randomly assigned to either the control group (usual care group) or the intervention group (motivational interviewing group).
Results: The results of this study demonstrated that the total scores and the mean scores for each dimension of the adherence questionnaire were increased in the intervention group ($P < 0.05$), and the systolic blood pressure and diastolic blood pressure of the hypertensive patients greatly decreased in the intervention group during the six months of the motivational interviewing counselling ($P < 0.05$).
Conclusion: The application of motivational interviewing for hypertensive patients is a promising approach for sustaining the clinical benefits of adherence behaviour.
Practice implications: Motivational interviewing should be provided to hypertensive patients at hospitals and community health centres to assist patients in controlling their BP and to enhance treatment adherence. A series of training courses on the motivational interviewing technique should be provided to nurses.

1. Introduction

The incidence of hypertension in China is rapidly rising because of changing lifestyles and the extending life span. It is estimated that there were 200 million diagnosed hypertensive patients in 2009 in China; the rate of increase of diagnosis exceeds 18% each year [1,2]. Except for pharmacological therapy, lifestyle modification (e.g., dietary adjustments and increased regular physical activity) is the major approach to treat, delay or prevent the complications related to hypertension [1,3]. Adherence is defined by the World Health Organisation (WHO) as the extent to which a person's behaviour of taking medicine, following a diet and/or executing lifestyle changes corresponds with the recommendations of a healthcare provider [1,2]. Previous studies have demonstrated that the low adherence to treatment by hypertensive patients is one of the main reasons for uncontrolled blood pressure (BP), which leads to an increase in the complications of hypertension, the physical and psychological burden of the patient and the heavy economic burden of the family and society [1,3]. It is estimated that the annual direct and indirect cost of hypertension and the related complications in China are over $ 35 million [4]. Effective strategies are necessary and mandatory to improve patient adherence to treatment. Earlier studies showed that the traditional approach of presenting information and advice to hypertensive patients has no marked effect in improving adherence behaviour [5].

In view of the limited effectiveness of the traditional approaches to behavioural changes, Miller (1983) [6] created a novel method, motivational interviewing (MI), as an alternative to the usual care model for promoting behaviour changes in problem drinkers. MI is defined as a client-centred, directive method for stimulating intrinsic motivation to change behaviour by exploring and resolving ambivalence [7,8]. Healthcare providers encourage patients to assess their current behaviour and to explore this behaviour with respect to their aspirations, values and interests. They urge patients to address any discrepancy or ambivalence that might appear [9]. The MI process is conducive to communication between healthcare providers and patients and evokes natural psychological and behavioural changes in the patients [10].

* Corresponding author at: School of Nursing, Guangzhou Medical University, 195 Dongfeng Road, Guangzhou 510180, China. Tel.: +86 02081087267.
E-mail addresses: huaspring2013@126.com (C. Ma), zhouying0610@163.com (Y. Zhou), mayzhouwei@126.com (W. Zhou), windhcf@163.com (C. Huang).

0738-3991/$ – see front matter © 2014 Elsevier Ireland Ltd. All rights reserved.
http://dx.doi.org/10.1016/j.pec.2014.01.011

MI has been further developed and has been widely used for counselling in alcohol abuse cases; there is substantial evidence for its use in cases of substance misuse [11,12]. Recently, MI has been widely adopted in medical fields to improve the adherence to medication, dietary and exercise protocols of patients who have chronic obstructive pulmonary disorder [13], diabetes [14,15], hypertension [16,17], HIV [18], and obesity [19]. The results from Woollard et al. [16] found that the MI group produced significant decreases in BP compared with the control group. The findings of Ogedegbe et al. [17] demonstrated the beneficial effects of motivational interviewing for BP control among hypertensive African Americans. There have also been a small number of published studies examining the value of MI for patients with diabetes, Alzheimer's disease, and schizophrenia in China [20–22], but the details of the MI technique training and treatment conformity have not been reported. Although the efficacy of motivational interviewing has been demonstrated in patients with chronic diseases, its effect on treatment adherence is untested in Chinese hypertensive patients. It is necessary and mandatory to test the effectiveness of MI in hypertensive patients in China.

2. Methods

2.1. Aims

The aims of the study were to test the effectiveness of MI counselling compared with usual care for patients with hypertension. The outcome measures included treatment adherence, BP, laboratory indicators, quality of life (QoL) and self-efficacy.

2.2. Design and Intervention

2.2.1. Study design

This study was a randomised controlled trial in which 120 patients were randomly assigned to the usual care group (the control group) and the MI group (the intervention group). The individuals in the control group received the usual care from qualified nurses, whereas those in the intervention group received MI from trained nurses.

2.2.2. Study setting

Patients with hypertension were enlisted from two community health centres in the Haizhu District of Guangzhou City. One centre was a hospital-based practice, and the other was a community-based practice. The study was implemented from November 2011 to October 2012 in the MI and usual care groups.

2.2.3. Patient eligibility

Patients were recruited in the study if they met the following inclusion criteria: (1) patients older than 18 years who agreed to take part in the study; (2) patients diagnosed with essential hypertension by a cardiovascular physician; and (3) patients who took at least one antihypertensive medication. The participants were excluded, as follows, if they were: (1) secondary hypertensive patients or (2) pregnant women.

2.2.4. Procedures

2.2.4.1. Patient recruitment and enrolment. We recruited 12 clinical nurses as the study nurses; these nurses had clinical qualifications and knowledge of psychology. They screened all of the patients during visits to the cardiovascular outpatient department of two community health centres. A total of 158 potentially eligible patients were invited to attend the study, and 38 patients refused. The remaining 120 patients met the inclusion criteria and agreed to participate in the study; they were allocated to the usual care group or the MI group.

2.2.4.2. Randomisation. When the eligible participants visited the outpatient department, they were asked to select an envelope to randomly allocate all of the 120 participants to the control or intervention group. The number one on the envelope indicated that the patient was in the control group, and the number two on the envelope assigned the patient to the intervention group. All of the participants were masked to the group assignment; however, the participating nurses were not blinded to the assignment.

2.2.4.3. Outcomes assessment. The baseline data were collected when the patients enrolled in the study, and the second evaluation was conducted at week 24 (at the end of the intervention). The patients of the two groups completed identical questionnaires in two phases. The nurses who conducted the MI or usual care performed the evaluation. Nurses at the two community health centres took the BP of the patients during their outpatient visits in the two different phases of the study without joining the study. They used an identical type of calibrated digital BP monitor (Model FT-A11-2, Fudakang Industry Co., Ltd., Shenzhen, China) to measure the BP of each patient. The BP was measured in a seated position using an appropriately sized cuff after an initial rest period of 10 minutes. The nurses who conducted the MI or usual care collected the laboratory values from the patient medical records after the patients completed the first and second questionnaires.

2.2.5. Intervention

2.2.5.1. Motivational interviewing group.

2.2.5.1.1. Training. Before implementing the MI, three-day training sessions were organised to train the 12 clinical nurses in the study. The MI training courses were presented by a certified trainer. The training schedule was composed of lectures, demonstrations, role-playing, presentations and discussions. The nurses received a folder with study materials about the training, including background information about MI, principles and techniques of MI and cases for discussion and role-playing. The counselling skills of the nurses were tested after training. The nurses conducted a counselling session with model patients trained to assume the role of a patient taking antihypertensive medications. The counselling processes were audiotaped. The trainer reviewed each tape and provided feedback to the nurses concerning their counselling performances.

2.2.5.1.2. Adapted motivational interviewing. The counselling intervention was based on MI and social cognitive theory [7,23] and was designed to address hypertension care. It focused on the patients' behaviour changes, such as taking medication on time, healthy dietary habits, regular physical activity, drinking and smoking cessation and reducing stress. An MI-based counselling protocol was established, which included the following steps: (1) build rapport with the patients; (2) evaluate the patients' confidence and motivation for behaviour changes and their self-efficiency; (3) help the patients become aware of and address the ambivalence blocking their behaviour to change; (4) help the patients find the discrepancies between their values and their current behaviours; (5) provide strategies of adherence to behaviour changes; (6) summarise the pros and cons of the proposed behaviour changes; (7) set realistic and specific goals for behaviour modification; (8) prompt the patients to follow the plan for behaviour change; and (9) provide an overall summary of the MI session and the patients' performances [9,24].

The nurses asked the patients to record a daily diary, and the content included information on adherence to medication, dietary habits, physical activity, drinking and smoking, illness perception,