

Educational Intervention for Patients with Atrial Fibrillation

MOK Hoi Lam

Hong Kong Polytechnic University
Faculty of Health and Social Science, School of Nursing
Hung Hom
Kowloon
Hong Kong
e-mail: melody.hl.mok@polyu.edu.hk
telephone: +852 2766 7991

Abstract

It is estimated that there will be more than 15.9 million people suffering from AF worldwide by 2050. To further explore the effectiveness of educational intervention with social support on lowering the uncertainty in illness, this article presents a proposal of a care program with phone follow up among patients with AF. The uncertainty of the illness is found to be appraised as a danger among individuals with AF which brought them anxiety. The effects of educational interventions were mixed and the effects might not persist. Studies also showed that specialized care for patients with AF resulted in less emergency department visit and less hospitalizations. AF patients with greater social support experienced significantly less uncertainty in illness while their educational level was not associated with uncertainty. Nurses were recommended to maximize patients' perceived social support when intervening uncertainty in illness among AF patients. The proposed project concerning educational interventions with social support through group sessions and phone follow up should result in better patient outcomes.

Keywords: atrial fibrillation; educational intervention; social support; uncertainty in illness

1. Introduction

Atrial fibrillation (AF), being the commonest sustained cardiac arrhythmia, affects over 70,000 patients in Hong Kong [10]. From an epidemiological study, there are 4 millions Chinese suffering from AF in Mainland China [39]. With the aging population, it is estimated that there will be 5.2 million men and 3.1 million women aged over 60 with AF by 2050 in China [34]. It is also estimated that there will be more than 15.9 million people suffering from AF worldwide by 2050 [30]. AF can be existed in people who appear healthy but with lower than normal quality of life (QoL) [19]. The QoL of patients with AF was found to be significant worse than post-myocardial infarct patients and comparable to congestive heart failure [9]. Patients with AF also rated their QoL significant worse than patients with other arrhythmias [3]. AF increases the risk of ischemic stroke by about fivefold which also lead to

more severe stroke with greater disability. The risk of heart failure is also higher among patients with AF [20].

An international survey done by AF AWARE group found that one in four physicians experiences lack of time to educate the patients with AF. At least one-quarter of patients does not understand and cannot explain AF [1]. Many patients had fears of heart attacks or dying due to misunderstanding symptoms [8]. The uncertainty of the illness is found to be appraised as a danger among individuals with AF which brought them anxiety [17]. The structural provider of social support and education in the proposed program with credible authority should help reducing patients' anxiety through adaptation of the uncertainty. This also improves patients' quality of life [31]. According to previous studies, the effects on patient's AF knowledge and clinical awareness through educational interventions were mixed [7, 21 25].

To further explore the effectiveness of educational intervention with social support on lowering the uncertainty in illness, this article presents a proposal of a care program with phone follow up among patients with AF.

2. History of Educational Interventions on AF Patients

As aforementioned, the effects of educational interventions were mixed [7, 21, 25] and the effects might not persist [15, 16, 24, 26, 29]. Studies also showed that specialized care for patients with AF resulted in less emergency department visit and less hospitalizations [12, 13, 33]. The patients also had a better time in therapeutic range of INR and a higher level of satisfaction [28].

2.1 Educational Intervention

Brief educational intervention with an information booklet did not significantly improved patient's knowledge of the risks associated with AF. It had little effect in increasing awareness of the benefit of stroke prevention and the bleeding risks associated with anticoagulants. It did not significantly affect the patient's perception on AF. However, the information booklet significantly improved patient's knowledge of the target INR range and factors that may affect INR levels. Further research is required to determine the patients' perceptions on and the optimum type of educational intervention required to educate patients about such complex conditions [21].

It was suggested that many patients, even highly educated ones, have considerable difficulty in understanding quantitative information. Study also showed that patient education with narrative evidence using patient anecdotes may be more effective than statistical evidence for some patient outcomes. A common example of narrative health messages are the sharing of health experiences from friends and family members. The mass media also provide the public health narratives through simplifying issues while increasing vividness, authenticity and audience interest. Narratives helped in facilitating information processing, reducing counter-arguing, facilitating observational learning, and influencing perceptions susceptibility and social norms. AF patients may benefit from periodic education with narrative evidence [25].

According to the Canadian Cardiovascular Society Access to Care Working Group and the Canadian Heart Rhythm Society, the acceptable patient access time in out-patient clinic on management of AF should be less than 4-12 weeks, depending on the urgency of the need for consultation. A small scale trial on a model of AF clinic focused on initial contact and patient education by trained nurse clinicians showed that patient wait less time to have their AF managed. It also resulted in less emergency department visits and less hospitalizations [12].

Many patients had fears of heart attacks or dying due to misunderstanding symptoms [8]. Nurse-led AF clinic focusing on patient education, reassurance, prophylactic measures guided by electronic decision support based on the guidelines and the time spent with patients were the key of success in improving management of AF. Thereby decreased cardiovascular hospitalization and cardiovascular death [13].

The adherence to recommended management of AF often hindered with patients' poor knowledge of AF and its treatment. The TREAT trial aimed at improving patients' adherence

to oral anticoagulant through educational intervention. The intervention involved one-off focus group session (1-6 patients) utilizing an “expert-patient” focused DVD, educational booklet, self-monitoring diary and worksheet. It is showed that a theory-driven educational intervention significantly improves time in therapeutic range of INR among AF patients taking warfarin. As patients had their knowledge of AF improved, the perception of treatment harm reduced. This in turn improved treatment compliance and reduced adverse clinical outcomes [7].

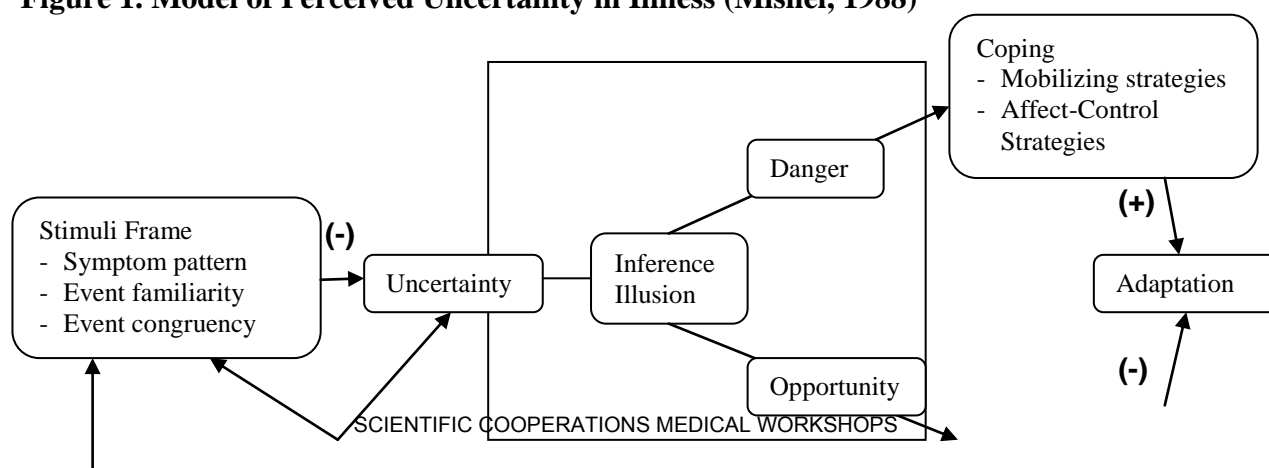
A multidisciplinary AF clinic, consisted of electrophysiologists and pharmacists, was designed in California aimed at reducing AF-related hospitalizations and stroke. The clinic involved individualized treatment plan, patient education, medication management and follow-up care. AF Patients were educated about the treatment options, anticoagulation therapy, dietary instructions, rate and rhythm control strategies, intervention options, dose titration, treatment of AF-associated risk factors, and management or prevention of common adverse drug effects. It was showed that managing AF patients in specialty clinics reduces AF-related hospitalizations and stroke [33].

A structured nurse-led educational approach aimed at improving AF patients’ knowledge on anticoagulant therapy was adopted in a regional hospital in UK. The use of an educational video and structured counseling significantly improved patients’ knowledge at hospital discharge and at 3 months post discharge. The patients also had a better time in therapeutic range of INR and a higher level of satisfaction [28].

2.2 Uncertainty in Illness

According to a Korean study, AF patients with greater social support experienced significantly less uncertainty in illness while their educational level was not associated with uncertainty. Nurses were recommended to maximize patients’ perceived social support when intervening uncertainty in illness among AF patients [18].

Figure 1. Model of Perceived Uncertainty in Illness (Mishel, 1988)





3. Study Design

A prospective randomized controlled trial will be conducted. Individuals with non-valvular AF are randomised into two groups for clinical management by a cardiologist or physician (usual care group) or under educational interventional program led by nurse (intervention group).

3.1 Patient

Inclusion Criteria: Individuals diagnosed with non-valvular AF detected on electrocardiogram (ECG) or holter, age over 18 years and capable of providing informed consent who are literate in Chinese will be recruited.

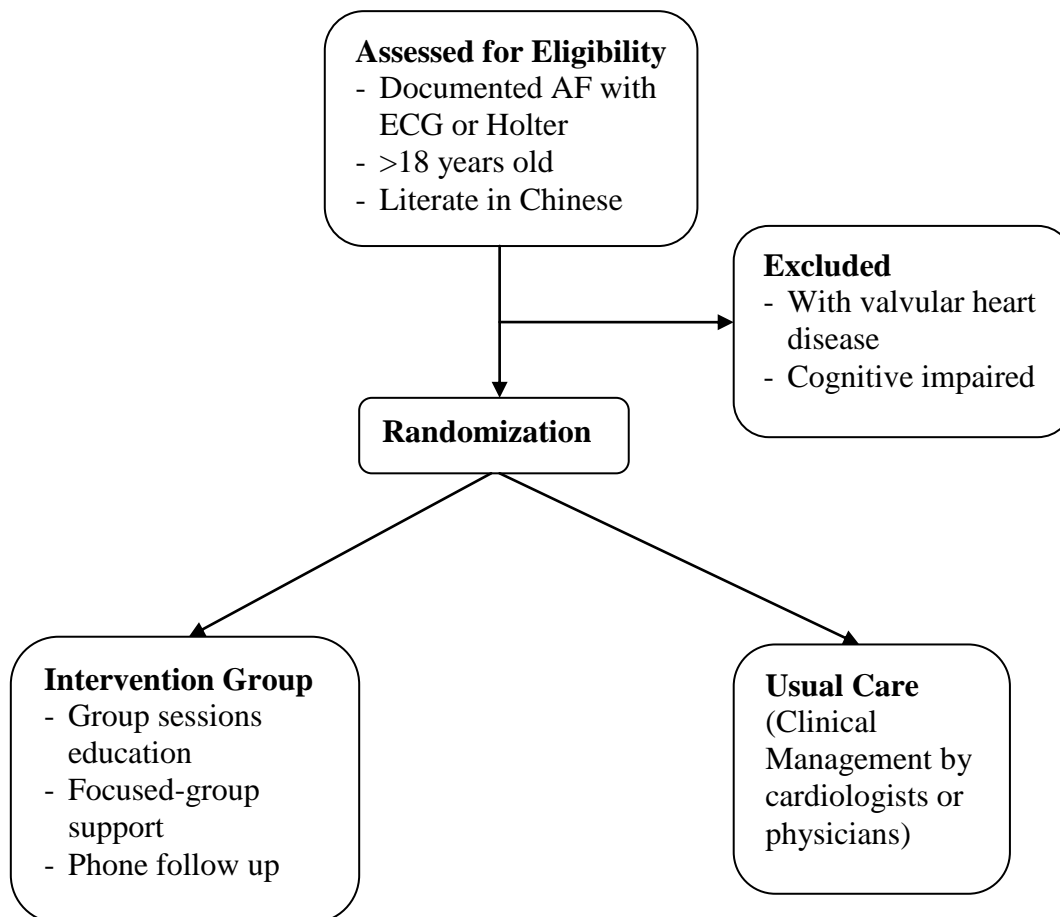
Exclusion Criteria: Individuals with valvular heart disease or cognitive imparited are excluded.

3.2 Intervention

An educational intervention with group sessions on AF knowledge will be provided. Focused-group support and phone follow up will also be provided to the participants in the intervention group.

3.3 Outcomes

1. The frequency of cardiovascular hospitalization will be reduced among individuals with AF under interventional care.
2. The QoL of individuals with AF under interventional care is higher than those under usual care as measured by AF-QoL questionnaire.
3. The knowledge on AF of individuals with AF under interventional care is better than those under usual care as measured by The AF Knowledge Scale.
4. The social support perceived by individuals with AF under interventional care is higher than those under usual care as measured by The Multidimensional Scale of Perceived Social Support.
5. The uncertainty level in illness of individuals with AF under interventional care is lower than those under usual care as measured by Mishel Uncertainty in Illness Scale.

Figure 2. Recruitment Flow Diagram

4. Conclusion

The prevalence of AF is escalating worldwide especially among the Chinese populations. How AF worsen ones' cardiovascular well-being brings about uncertainty of the illness which further lowers the patients' QoL. To my best knowledge, there are scarce chronic care programs for patients with AF using educational intervention with focus group social support around the world. The research studies on social support and uncertainty of illness among patients with AF are also limited. The proposed project concerning educational interventions with social support through group sessions and phone follow up should result in better patient outcomes.

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