Can J Diabetes 40 (2016) 43–49

Contents lists available at ScienceDirect

Canadian Journal of Diabetes

journal homepage: www.canadianjournalofdiabetes.com

Original Research

Classification of Support Needs for Elderly Outpatients with Diabetes Who Live Alone

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ARTICLE INFO

Article history:
Received 5 August 2015
Received in revised form
10 September 2015
Accepted 10 September 2015

Keywords:
Comprehensive needs
Elderly patients
Living alone
Support needs

ABSTRACT

Objectives: To investigate the support needs of elderly patients with diabetes and to classify elderly patients with diabetes living alone on the basis of support needs.
Methods: Support needs were derived from a literature review of relevant journals and interviews of outpatients as well as expert nurses in the field of diabetes to prepare a 45-item questionnaire. Each item was analyzed on a 4-point Likert scale. The study included 634 elderly patients with diabetes who were recruited from 3 hospitals in Japan. Exploratory factor analysis was performed to determine the underlying structure of support needs, followed by hierarchical cluster analysis to clarify the characteristics of patients living alone (n=104) who had common support needs.
Results: Exploratory factor analysis suggested a 5-factor solution with 23 items: (1) hope for class and gatherings, (2) hope for personal advice including emergency response, (3) supportlessness and hopelessness, (4) barriers to food preparation, (5) hope of safe medical therapy. The hierarchical cluster analysis of subjects yielded 7 clusters, including a no special-support needs group, a collective support group, a self-care support group, a personal-support focus group, a life-support group, a food-preparation support group and a healthcare-environment support group.
Conclusions: The support needs of elderly patients with diabetes who live alone can be divided into 2 categories: life and self-care support. Implementation of these categories in outpatient-management programs in which contact time with patients is limited is important in the overall management of elderly patients with diabetes who are living alone.

Mots clés :
Besoins globaux
Patients âgés vivant seuls
Besoins de soutien

RÉSUMÉ

Objectifs : Examiner les besoins de soutien des patients âgés diabétiques et classifier les patients âgés diabétiques vivant seuls selon les besoins de soutien.
Méthodes : Les besoins de soutien ont été tirés d'une revue de la littérature de journaux et d'entretiens pertinents de patients en consultation externe aussi bien que du personnel infirmier spécialisé dans le domaine du diabète pour préparer un questionnaire comportant 45 questions. Chaque question a été analysée sur une échelle à 4 points selon la méthode de Likert. L'étude a inclus 634 patients âgés diabétiques qui ont été recrutés dans 3 hôpitaux du Japon. L'étude exploratoire des facteurs a été réalisée pour déterminer la structure sous-jacente des besoins de soutien, puis a été suivie de la classification hiérarchique pour clarifier les caractéristiques des patients vivant seuls (n = 104) qui ont eu des besoins de soutien courants.
Résultats : L'étude exploratoire des facteurs a suggéré une solution à 5 facteurs comportant 23 questions : l'espoir de cours et de réunions, l'espoir de conseils individuels, dont les interventions d'urgence, l'absence de soutien et le désespoir, les obstacles à la préparation des aliments, l'espoir d'un traitement médical sûr. La classification hiérarchique des sujets a généré 7 groupes, dont un groupe de besoins de soutien non particulier, un groupe de soutien collectif, un groupe de soutien aux autosoins, un groupe de discussion sur le soutien individuel, un groupe de soutien à la vie, un groupe de soutien à la préparation des aliments et un groupe de soutien en milieu de soins de santé.

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1499-2671
http://dx.doi.org/10.1016/j.jcjd.2015.09.005

Conclusions : Les besoins de soutien des patients âgés diabétiques qui vivent seuls peuvent être divisés en 2 catégories : soutien à la vie et aux autosoins. La mise en place de ces catégories dans les programmes de prise en charge des patients en consultation externe au cours desquels la durée de rencontre avec les patients est limitée joue un rôle important dans la prise en charge globale des patients âgés diabétiques qui vivent seuls.

Introduction

In 1984, The World Health Organization proposed that the health status of elderly patients should be judged by functional capacity and extent of functional dependency rather than by the presence or absence of disease (1). Extension of lifespan is no longer the goal of management; rather, improvement in functional independence and the achievement of better qualities of life are becoming more important. On the other hand, self-care is a key element of a chronic illness such as diabetes mellitus, and that requires maintenance of functional independence and prevention of any decline in functional status. It is a great burden for elderly patients with diabetes, especially those with functional impairment, to provide self-care and maintain functional independence (2–5). These people need support from children, friends and volunteers (6,7). However, some elderly patients with diabetes who live alone cannot obtain the necessary support and, thus, find it difficult to maintain functional independence and continue self-care.

Elderly patients with diabetes who live alone have various problems related to self-care, such as barriers to preparing meals (3,8), forgetting to take medicines (4), depression (9–11) and isolation. Isolation, especially, is a serious issue. Support by children as well as friends and neighbors is important for elderly patients living alone with chronic illness including diabetes (12,13). Although elderly patients living alone can sometimes receive assistance with medication management, transportation, advocacy and representation, emergency help and security (14,15), such networks are liable to diminish, which could increase their sense of isolation because of worrying about being a burden on the family (16,17), reduced companionship caused by illness and ageing (18,19) and lengthened geographic distance from others (15,20). In particular, elderly patients with diabetes are considered to need comprehensive support for self-care as well as for maintaining functional independence because functional decline directly influences self-care (21). Is it possible to provide support for elderly patients with diabetes living alone during their monthly hospital appointments? The purpose of the present study was to examine the support needs of elderly patients with diabetes and to classify those patients living alone based on such support needs.

Methods

Participants

Patients with diabetes (n=634) were recruited from 3 different types of hospitals in Japan, including a university hospital, a city hospital and a clinic. Patients eligible for inclusion in this study were ≥65 years of age, were patients at one of the facilities, had been diagnosed with diabetes mellitus and were able to communicate in Japanese. Subjects with mental confusion or physical pain were excluded from the study.

Data collection

The study protocol was approved by the human ethics committees of the university and participating hospital. The study was conducted between September 2014 and April 2015. Potential subjects were informed of this study by their physicians or nurses before or after their scheduled appointments. Upon agreement, they were introduced to a representative member of the research team who explained the purpose of the study and the nature of participation. After agreement to participate, each subject received a questionnaire to self-complete at home or at the facility. In principle, participants were asked to fill out the questionnaires by themselves; however, for some patients and in consideration of their ages, the questions were read aloud by the researcher in a private interview room, and the answers were recorded by the subject. Participants provided consent by completing and submitting the questionnaires.

Measures

The questionnaires consisted of the Support Needs Survey Form (SNSF) and the Instrument of Diabetes Self-Care Agency (IDSCA). The SNSF was designed to identify the barriers to and relationships between functional decline and self-care. It was a self-reported questionnaire comprising questions about socioeconomic status, state of diabetes and support needs. Support needs were extracted from literature reviews of relevant journals and interviews with 6 diabetes outpatients as well as 3 certified diabetes nurses; they were converted into the contents of questions. Questions about support needs consisted of 45 items, and the response to each item was rated on a 4-point Likert scale: 1 (agree) to 4 (disagree) or 1 (never) to 4 (frequent). Support needs included the following indices: barrier to cooking, hope for diabetes class, and advice on anxiety and trouble. Questions concerning socioeconomic status covered the following indices: age, sex, facilities within 10 minutes' walking distance, activities of daily living (ADLs), levels of care needed, frequency of going out (days/week), meal times (times/day), and presence of a reliable person during illness. ADLs were estimated by using a Roken score with 13 items. The Roken score was developed to assess the ADLs of the elderly and has sufficient reliability and validity (22). The level of care needed refers to a class of the long-term care insurance system. The long-term care insurance system is a social security system provided to applicants (mainly those ≥65 years of age) by the insurer and is designed to provide care according to the physical and mental status of the applicants. The care needed is classified into 3 major levels: independence, assistance required and care required. The care-required category represents the highest care level (23). The state of diabetes was assessed using the following indices: glycated hemoglobin (A1C) levels, body mass indices (BMIs), duration of diabetes and treatment regimes used for diabetes.

A pilot test was conducted with 10 elderly outpatients with diabetes to assess the time required to complete the questionnaire and to determine any difficulties experienced in comprehending any of the questionnaire items.

The IDSCA is a comprehensive measurement of the self-care abilities of patients with diabetes. It consists of 35 items and 7 domain scales (ability to make the most of the support available; monitoring ability; motivation to self-management; ability of one's own self-management; stress-coping ability; application or adjustment ability; and ability to acquire knowledge); higher scores indicate a higher self-care ability. IDSCA has sufficient reliability and validity (24).