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A Literature Study on a Smoking Cessation Support by Nurse at Medical Institution

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Abstract

This study, it aims to clarify actual conditions and issues of a smoking cessation support by nurse at medical institution on the basis of the preceding thesis discussing a role of nurse involved in a smoking cessation support. The study utilized the Journal of Japan Medical Abstracts Society (Web version) as database and targeted the papers published in 2006-2016 after the national insurance coverage of medical care fee for nicotine dependence. The keywords for literature search were set as "smoking cessation", "nurse", and "instruction", then 23 out of 65 papers were selected as an analytical subject covering a smoking cessation support by nurse at medical institution.

The places for a smoking cessation support by nurse at medical institution were largely divided into two categories: respiratory-related outpatient/general ward including or excluding smoking cessation in outpatients. The roles of nurse for smoking cessation in outpatients were not consolidated along with unclear support contents. Because a successful smoking cessation rate would be lower among the people under 50 years old or females, it is important to provide careful supports to those patients. The roles of nurse were also not clarified except smoking cessation in outpatients. It was pointed out that a nurse had a lack of knowledge for the instruction of smoking cessation and a lower level in the instruction technique.

As a nurse issue, there is a pressing need to enhance knowledge/technique for a smoking cessation support. It is important to comprehensively provide advices in terms of countermeasure for re-smoking or symptom relief in case of an adverse event on the basis of professional knowledge/technique at the time of individual consultation and health class, and also securely conduct a health checkup and an evaluation of smoking cessation condition for patients at the same time.

Keywords: Smoking Cessation Support; Nurse; Instruction; Medical Institution

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Introduction

Many people are aware that smoking can be harmful to one's health and may cause various diseases. Some smokers attempt to quit smoking on their own, but since it would be excruciatingly painful to experience withdrawal symptoms during the smoking cessation period, it is reported that approximately two-thirds of the subjects would smoke again within 3 days [1]. In addition, some patients who wish to quit smoking would make a self-judgment as he or she can quit smoking by himself/herself without help of others even during the course of treatment or discontinue the treatment and start smoking again due to a nicotine withdrawal symptom and adverse drug reaction [2]. According to the Ministry of Health, Labor and Welfare [3], a successful smoking cessation rate was 76.9%/49.2% for nicotine patch and 79.1%/50.1% for Varenicline at the time of the treatment completion/9 months after the treatment completion respectively, but the rate was declined to approximately 50% within one year after the treatment completion.

Yet, on the other hand, it was clarified that a successful smoking cessation rate was increased due to smoking cessation supported by medical professions. In such a case, it is reported that a successful smoking cessation rate was only 0.3% with no support intervention while indicating 3.3% for question/advice of smoking cessation and 5.1% for question/advice/leaflet and follow-up of smoking cessation. Furthermore, since a successful smoking cessation rate with a counseling effect indicated 3.9% with advice only from doctor and 7.2% with advice from doctor/nurse, the effect on a smoking cessation support was increased through the intervention conducted by more than 2 types of profession [4]. It suggests that a successful smoking cessation rate at medical institution could

achieve an additional increase with active intervention by both doctor and nurse instead of doctor alone.

Currently, a program for smoking cessation treatment covered by national insurance is basically conducted as total 5 times in 12 weeks by a participation of a full-time nurse or assistant nurse in a smoking cessation treatment under the facility standards. For improving a successful smoking cessation rate, it is important to improve skills for professional smoking cessation support by doctor and nurse as well as anxiety reduction of patient for smoking cessation and establishment of trust relationship. In particular, it is not too much to say that nurse can be a significant influence on continuation or discontinuation of patient's smoking cessation due to often being a familiar existence to patients during the smoking cessation treatment. Thus, we consider it is necessary to clarify what role, work content, or issue of nurse would be appropriate in a smoking cessation support to improve the successful smoking cessation rate in future.

In the study, it aims to clarify actual conditions and issues of a smoking cessation support by nurse at medical institution on the basis of the preceding thesis discussing a role of nurse involved in a smoking cessation support.

Methods

The study utilized the Journal of Japan Medical Abstracts Society (Web version) as database and targeted the papers published in 2006-2016 after the national insurance coverage of medical care fee for nicotine dependence. The keywords for literature search were set as "smoking cessation", "nurse", and "instruction", then 23 out of 65 papers were selected as an analytical subject covering a smoking cessation support by nurse at medical institution.

With the analysis method, items such as publication year, research purpose, study subject, contents of a smoking cessation support by nurse, and support issue were organized and analyzed. However, a smoking cessation support for patients with mental disorder and cancer was excluded.

Results

The number of papers by publishing year

Approximately 1-3 papers were published for a smoking cessation support by nurse annually except 2010 (8 papers) (Figure 1).

In Japan, the Health Promotion Act was enforced in 2003 to mandate a prevention of passive smoking, but there was only one paper describing passive smoking among the target papers. The paper mentions it would be necessary to reduce a smoking opportunity for increasing the number of successful persons in smoking cessation. Moreover, a 12-week health insurance treatment was introduced since medical expense of nicotine dependence was covered by national insurance from April 2006, but there was only one paper in that year with the annual outcome report for smoking cessation in outpatients [5] and the contents described a smoking cessation support at patient's own expense, not for the support covered by national insurance. Varenicline was approved as a smoking cessation medicine in 2008, but of 19 papers after 2008, there was only one paper in each 2010 and 2011 as describing a smoking cessation treatment with Varenicline.

In Japan, there are 2 academic associations called "Japan Society for Tobacco Control" and "The Japanese Association of Smoking Control Science", but only one paper was published for 3 initial

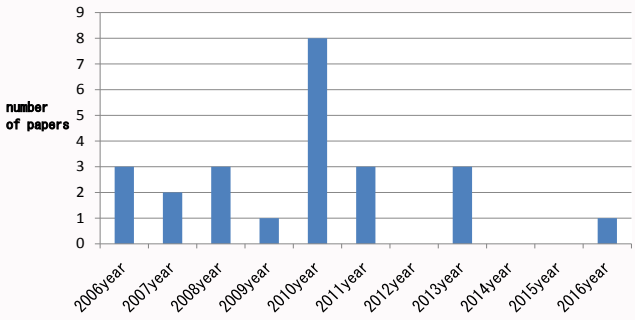

Figure 1: The number of papers by publishing year.
Approximately 1-3 papers were published for a smoking cessation support by nurse annually except 2010 (8 papers).

smoking cessation behaviors by nurse regarding smoking cessation in outpatients [6].

Condition of the subjects for smoking cessation support

There were 2 papers for only males and no paper for only females in terms of the subject gender. Then, there were 8 papers for both males and females with a larger number of males. They widely covered age segments as 10s - 70s. Since the successful smoking cessation by age was 47.8% for 20-30s, 66.7% for 40s, 77.8% for 50s, and 85.7% for 60s, it was reported that the rate would be higher along with older age segments and a discontinuation of treatment tended to be higher for the patients in their 50s or younger [7].

The conditions varied among the patients such as a hospitalized patient with a scheduled surgery, a patient with a certain underlying disease/respiratory symptom, an outpatient with being strongly recommended for smoking cessation by doctor, or a patient with no underlying disease/subjective symptom.

Current condition of a smoking cessation support

The place for a smoking cessation support by nurse was largely divided into two categories as respiratory-related outpatient/general ward including or excluding smoking cessation in outpatients.

Support contents for smoking cessation in outpatients: Smoking cessation in outpatients was divided into a support by a smoking cessation team with or without the cooperation of multiple occupations.

There were 3 papers related to cooperation of multiple occupations. In one of these papers, a support team was composed of doctor, nurse, pharmacist, and managerial dietitian for smoking cessation in outpatients. Since allocation of roles in the team was adopted, nurse played multiple roles such as explanation for medical interview/ insurance applicable treatment before medical examination, check for Brinkman index, and measurement for carbon monoxide in exhalation [8].

A smoking cessation support team made an intervention in another paper as holding a health class for a small group with 5-10 people for 6 months to provide an usage for a combination of smoking cessation behavior therapy (i.e. "Behavior-pattern alteration method", "Environmental improvement method", and "Alternative behavior method") and nicotine replacement therapy against [9]. Nurse was in charge of individual consultation before/after the health class.

In other papers, nurse understood a patient condition as

filling out a medical questionnaire or measuring carbon monoxide concentration before medical examination. In this paper, the study found a lower smoking rate for females compared to males according to the report for the successful smoking cessation rate by gender [7].

There were 3 papers not describing cooperation of multiple occupations. In one of those papers, 3 initial behaviors for smoking cessation were proposed as "Discard any smoking goods such as a lighter and ashtray the day before smoking cessation", "Declare his/her intent to initiate smoking cessation", and "Find something else other than smoking". Since it has an advantage that patients at their first visit could initiate smoking cessation without prior preparation or arrangement, as a result, the successful smoking cessation rate was higher along with a larger number of patients actually carrying out initial behaviors for smoking cessation [6]. In another paper, nurses have interviewed individual conditions of smoking cessation and provided an advice for how a patient should deal with a smoking desire through the information provisions such as nicotine patch application method and its side effects or even being involved as a contact person for consultation at the time of trouble [10].

Furthermore, according to the paper reporting the 8-week support results with use of nicotine patch by one doctor and one nurse, there were some patients who started smoking again triggered by weight gain, passive smoking, or one cigarette after the treatment, but approximately half of the entire patients were successful in smoking cessation for 6 months or longer after the treatment [5]. The result was approximately the same rate as the successful smoking cessation rate in Japan or 50.1% (Ministry of Health, Labor and Welfare, 2009). However, the paper did not explain the nurse support contents in detail.

Support contents other than smoking cessation in outpatients: Except smoking cessation in outpatients, smoking cessation support by doctor and nurse was provided to respiratory outpatients or patients hospitalized in general ward.

Individual consultation was offered to respiratory outpatients for approximately 30 minutes with use of pamphlets [11], but the paper did not describe the detailed contents regardless of a nurse participation in the consultation.

There were 3 papers on smoking cessation support in the general ward and one of these papers described the guidance of smoking cessation by doctor and nurse through using the pamphlets with reference to the picture of a patient's lungs [12]. During the session, a support person did not deny a smoking habit, but made efforts to provide an instruction method in accordance with the patient's response [12]. In addition, according to the paper describing a smoking cessation support for patients with myocardial infarction, it was reported that a patient who could not continue smoking cessation after the initial onset of disease would even have a difficulty to continue smoking cessation after the recurrence [13], but the paper did not describe a role of nurse in such a situation.

Moreover, with the survey results for 1,206 nurses working at general hospitals, it was pointed out that issues for a smoking cessation support by nurse were not sufficiently considered since nurse could ask patient's smoking habits and recommend smoking cessation but failed to support patients along with their interest as effectively evaluating an individual intention of patient's smoking cessation [14].

Discussion

Issues on smoking cessation support from a viewpoint of successful smoking cessation rate

It was reported that the successful smoking cessation rate was lower for people at the age of 50 or younger and females.

As a reason for a lower successful smoking cessation rate among the people 50 years old or younger, they might face a difficulty to maintain an intention of smoking cessation due to no underlying illness or symptom even with a higher dependency on tobacco [8]. As a countermeasure, a patient needs to establish a committed intention of smoking cessation after a careful explanation of necessity for smoking cessation and physical/mental risks or social disadvantages by smoking. Specifically, it would be necessary to actively intervene for the people with a higher Brinkman index of adolescent/mature stage by taking time with the consideration of the result for a high discontinuation rate as described previously. In such a case, it is important to immediately propose 3 feasible initial behaviors for smoking cessation by letting a patient accept them as many as possible [7].

Next, it is considered that the background for a lower successful smoking cessation rate among females could be caused by a higher female smoking dependency and difficulty to commit smoking cessation [7]. In addition, as a reason for a smaller number of female participants in smoking cessation class, it is assumed that some female smokers may feel resistance to participate in such a class together with male smokers. In the preceding study, it was mentioned that a smoking cessation class only for female smokers may be required as carefully understanding female emotional feelings in such circumstance [9], but there was no specific description in terms of thoughtfulness for female smokers in the paper. In future, it is required to plainly explain an influence on female's physical/mental health by smoking while examining a health class planning with the consideration of female's living hours and activity range such as household work, childcare, and working style. For instance, it might be effective to hold a health class only for females.

Roles and tasks of nurse involved in smoking cessation support

The expected roles by nurse: The roles of nurse were different and not consolidated depending on medical institution such as an explanation for medical interview or treatment covered by national insurance prior to medical examination, check on Brinkman index, measurement of carbon monoxide in exhalation, and individual consultation. Among those tasks, a role in individual consultation or health class was not clarified.

It is said that the reasons for discontinuation of smoking cessation by patient could be the emergence of nicotine withdrawal symptoms such as irritation, headache, malaise, or passive smoking [10]. Furthermore, adverse event symptoms by drug therapy could appear as anxiety/confusion against therapy or a desire for smoking even during the therapy. In consideration of physical/mental anxiety or burden by those patients, a nurse may be required to conduct the following activities: Make a patient aware of benefits by smoking cessation, Make a patient express a self-affirmation, accept a sense of anxiety, and examine an expression of adverse event symptoms and drug effects [10]. However, because roles of nurse are not consolidated, it is difficult to mention that those roles are fulfilled in the current circumstances where issues are revealed even in the

aspect of knowledge. In addition, while nurses are in the position to provide a smoking cessation support including instruction technique, some nurses provide a smoking cessation support despite a lack of interest in smoking issues or ambiguous instruction method/reason for smoking cessation. Thus, although a nurse may be able to collect patient's smoking information or provide a proposal of smoking cessation, it was pointed out that the nurse cannot confirm an effect by a smoking cessation support or provide an advice for a smoking cessation method [15].

For solving those issues, it is important to thoroughly propose countermeasures against re-smoking or advice for relief of adverse event symptom at the time of individual consultation or health class in addition to physical condition check and evaluation on smoking cessation conditions through telephone or e-mail even after the treatment completion or on non-visiting days. At the same time, some patients as originally a heavy smoker may start smoking again due to a daily stress or environmental change. For that reason, it is required to understand and deal with a patient's stress and physical/mental change as early as possible. Since existing nearby patients and might be easier to build a trust relationship with them, a nurse can play the role appropriately/sufficiently. In addition, it would be an essential role to establish a system for closely sharing information or maintaining cooperation with other departments/sections from a viewpoint of patient's various needs [12].

Nurse issues in smoking cessation support: Despite the fact that a placement of full-time nurse is specified as a facility standard for smoking cessation support program, it can be said that the roles for nurse in the program are not consolidated or remain unestablished yet. In particular, it would be significant issues for nurse to provide a concept of knowledge provision and immature instruction technique for patients.

Because some patients only hold a false perception or vague knowledge for smoking cessation, it may require to provide easy-to-follow correct knowledge depending on each patient characteristic [11]. At the time of information provision, it is essential for nurse to prepare or utilize educational media/materials such as pamphlet, leaflet, and DVD in accordance with age, gender, and lifestyle of individual patient through medical examination and treatment. For achieving such activities, it is necessary for nurse to deal with preparation/development of high quality educational media/materials or an effort of usage method.

Because some nurses may not be able to maintain their self-confidence to carry out a smoking cessation support in case of a patient already in a lower smoking cessation stage or even do not understand a support method in accordance with a smoking cessation stage, it was pointed out that a nurse's self-efficacy would be lower if a patient belongs to a lower smoking cessation stage [13]. A smoking cessation support by nurse with a low self-efficacy might possibly influence on a successful smoking cessation rate. According to the preceding studies, since it was reported that a nurse perception for smoking cessation support has increased along with an individual behavior change after the study session in general ward, it suggests an effectiveness of nurse education could be found in such a case [16].

In consideration of the suggestion, it would be necessary for nurse in a smoking cessation support to enhance self-efficacy including/excluding smoking cessation in outpatients and simultaneously introduce a training program to popularize the knowledge/technique for a smoking cessation support [15]; therefore, the approach could influence on a successful smoking cessation rate in future.

Yet, it is a fact that some nurses are unfortunately smokers themselves [17]. Although there were some researches for consciousness survey in terms of smoking by nurse among the cited literatures, we could not find a paper describing a smoking cessation which actually supports for nurse smokers. It would be difficult to provide an appropriate smoking cessation support to patients without adequate persuasion when a nurse herself/himself smokes. In future, it would be required to proceed a research of a smoking cessation support for nurse smokers.

Conclusions

- The places for a smoking cessation support by nurse at medical institution were largely divided into two categories: respiratory-related outpatient/general ward including or excluding smoking cessation in outpatients.

- The roles of nurse for smoking cessation in outpatients were not consolidated along with unclear support contents. Because a successful smoking cessation rate would be lower among the people under 50 years old or females, it is important to provide careful supports to those patients. For instance, the supports could be a planning of a smoking cessation class only for females with sufficient care of their emotional feeling or living hours.

- The roles of nurse were also not clarified except smoking cessation in outpatients. It was pointed out that a nurse had a lack of knowledge for the instruction of smoking cessation and a lower level in the instruction technique.

- As a nurse issue, there is a pressing need to enhance knowledge/technique for a smoking cessation support. It is important to comprehensively provide advices in terms of countermeasure for re-smoking or symptom relief in case of an adverse event on the basis of professional knowledge/technique at the time of individual consultation and health class, and also securely conduct a health checkup and an evaluation of smoking cessation condition for patients at the same time.

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