Nursing Interventions on Tobacco Control: an Integrative Review

Intervenções de Enfermagem no Controle do Tabagismo: uma Revisão Integrativa
Intervenciones de Enfermería en el Control del Tabaquismo: una Revisión Integradora

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Abstract

Introduction: Tobacco addiction is considered a serious public health problem and the nurse has got a very important role in the design of strategies to control this disease. Objective: To identify nursing interventions related to tobacco control.

Method: It is an integrative review. Articles and abstracts published between 2000 and 2010 were researched in the LILACS and MEDLINE databases, using the following keywords: enfermagem/tabagismo and tobacco/nursing; and articles published in the CINAHL databases between 2008 and 2010, using the keywords: tobacco/nursing/intervention. Result: Following the strategies defined for the study, the search resulted in 1,394 publications. 55 publications were found in LILACS, 1,231 in MEDLINE and 108 in CINAHL databases. Of these productions, six full papers were selected from the Latin American and 119 from international databases, of which 16 were full articles from CINAHL and 103 from MEDLINE. The first review found that 1,269 publications were not specifically related to the research question or did not meet the proposed inclusion criteria, resulting in 125 productions that were finally considered for the study. The findings suggest a number of interventions provided by nurses for various audiences and that 39 of them were directed at smoking cessation.

Conclusion: Faced to the productions evaluated, it was found that the nurse is a very important professional for tobacco addiction control and those interventions found show a relationship with the recommendations from scientific literature.

Key words: Smoking; Nursing; Intervention Studies; Smoking Cessat

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INTRODUCTION

The World Health Organization (WHO) considers smoking as the leading cause of preventable deaths in the world.1

Tobacco smoking is defined as a chronic disease with multiple relapses, and has an entry in the International Classification of Diseases (ICD), due to the use of psychoactive substances. According to the WHO, it is also considered a pediatric disease, since average smoking initiation occurs around the age of 15.3

It is estimated that 3,000 children start smoking every day. Therefore, public health experts agree that efforts to control tobacco use should be focused on youth.5

In the next 50 years, tobacco use may cause about 450 million deaths worldwide. WHO believes that if this situation is not reversed, 10 years from now there will be about 10 million annual deaths related to tobacco consumption, and 70% of them will occur in poor countries.4

It is believed that tobacco addiction is the cause of more deaths and disabilities than all other drugs combined and that the annual mortality by tobacco is greater than the combination of deaths related to drug abuse, AIDS, suicide, homicide and vehicle accidents.4

Considering that the tobacco industry is influential in most developing countries, fueling commerce and advertising, health agencies recommend that advertising on cigarette packages be inserted, warning about the danger to the health of both smoker and nonsmoker population.8

This fact is part of a list of measures to prevent smoking in Brazil, whose impact reveals that there was a significant decline in its prevalence in our country between 1989 and 2006. About two decades ago, the government launched the National Program for Tobacco Control (Programa Nacional de Controle do Tabaco - PNCT), with a noticeable improvement on efforts as of 1990, with a focus on non-price interventions such as the ban of advertising and smoking restrictions in public places.8

In a survey released by the Ministry of Health, it was found that about 80% of smokers want to quit smoking, except that only 3% succeed each year. Quitting smoking is a very complex process, therefore the action of specialized professionals, effective techniques for treatment, and resources to assess individual needs, the degree of nicotine dependence and readiness to quit smoking are necessary.10

It is estimated that worldwide there are about 17.3 million nurses, making them the largest group of health professionals. Accordingly, this group represents an important link to the development of actions for tobacco control.11

According to PNCT, it is up to nurses: to participate in the development of technical materials; to train professionals; set goals; to train teams in health units, workplaces and schools; to encourage and monitor the process of smoking cessation by smokers; to adopt educational, regulatory and organizational measures; to implement preventive actions to secondhand smoke; to perform nursing consults focusing on cognitive behavioral approach and evaluation of the level of dependence on tobacco.12

It is noteworthy that in the list of nursing diagnoses, according to the taxonomy of the North American Nursing Diagnosis Association (NANDA), there are reports of a diagnosis related to the motivation for smoking cessation, namely: health seeking behavior related to smoking cessation.13

This diagnosis indicates a nursing intervention named assistance to quit smoking, which in turn points to a series of 33 related activities, as stated by the Nursing Interventions Classification (NIC), among the most important: recording the current status of cigarette use and history of the smoker; determining willingness of patients to stop smoking; providing smokers with clear and consistent advice; helping patients to identify reasons to quit and barriers to smoking cessation; guiding the patient on the physical symptoms of nicotine withdrawal and reassure them about their transience; providing information to patients about nicotine replacement products; helping patients to recognize situations that lead to smoking; encouraging them to participate in support groups or individual therapy; maintaining frequent contact by phone, always congratulating them on the progress and offering help in difficulties and relapses.14

Given the above and considering nurses as health care professionals in tobacco control activities worldwide, this article aims to identify nursing interventions related to tobacco control. Guided by this scenario, identifying these interventions becomes critical, considering the timely contribution that nurses provide in the process of health care, working in various fields and specialties.

METHOD

It is an integrative review study with predetermined steps. To initiate the search, the theme, objectives, key words and research question related to the inclusion of nursing in tobacco control were defined first. The research question was: what are the nursing interventions for tobacco control? This question is within the context of the creation of programs for tobacco control and emphasis on efforts in the fields of health and legislation of countries for the regulation of advertising and marketing of tobacco products.

The searches were conducted in January 2011, in the Latin American and Caribbean Literature of Health Sciences (LILACS), Electronic Index Medicus
of the National Library of Medicine (MEDLINE) and Cumulative Index to Nursing and Allied Health Literature (CINAHL) databases, by using the following keywords: "tabaco / enfermagem" and tobacco and nursing. On the latter database mentioned, the following descriptors: tobacco / nursing / intervention were used to better operationalize the study.

We used the following inclusion criteria: articles in Portuguese, English and Spanish, available for free in these databases, abstracts and articles published during the period between 2000 and 2010, in both LILACS and MEDLINE databases, and during the period from 2008 to 2010 at the CINAHL database, that mentioned, in the abstract, reference to interventions / activities performed by nurses related to tobacco control.

It is noteworthy that CINAHL database searches were conducted between 2008 and 2010 considering that a systematic review involving the subject in matter was found, which had already analyzed existing publications during the period from 1983 to 2007. The publications mentioned in this review for the period between 2000 and 2007 were found and considered as part of the mentioned systematic review.

Exclusion criteria were theses and dissertations as well as articles that did not address or report interventions / activities performed by nurses related to tobacco control. Studies whose abstracts were unavailable and did not discuss this subject were also excluded.

The searches were conducted by the authors of this article and, for the pre-selection of the articles found, an analysis of all abstracts available for categorization of the studies was performed.

Subsequently, we created three spreadsheets in Excel in order to organize the articles obtained in each base, and duplicate publications were eliminated in one of them, and the one that displayed the full text was preserved.

After pre-selection of articles by the initial reading of abstracts, a second analysis was performed through the perusal of pre-selected publications to decide the inclusion and exclusion of these texts according to the established criteria. In this stage, the work was performed by two pairs of independent reviewers.

We used a specific tool for evaluating the articles to be included, which consists of article title, author, country, year, journal name, objectives, methodology, interventions, target audience and stages related to the smoker's approach.

For the preparation of the results, the following steps were performed: identification of articles that answered the research question, number of articles related to the topic by year of publication, type of methodology adopted and the initiation and cessation interventions described in the study. Quantitative analysis consists of determination of frequency and percentage of items selected according to the databases, year of publication, area of specialty of periodicals, countries of publication of periodicals and implementation stages of interventions by nurses.

It is noteworthy that, despite recognizing the relevance of NANDA and NIC taxonomies for the systematization of nursing care, we did not aim to correlate these activities with those found in the publications.

**RESULTS**

Following the strategies defined, the search resulted in 1,394 publications. We found 55 publications in LILACS, 1,231 in MEDLINE and 108 in CINAHL. Of these productions, six full papers were selected in the Latin American database and 119 in international databases, 16 full papers in CINAHL and 103 productions in MEDLINE, as shown in Table 1.

The first review found that 1,269 publications were not specifically related to the research question, or did not meet the proposed inclusion criteria, leaving 125 productions that were finally considered for the study.

In Table 2, we show the distribution of production, according to year of publication in these bases, with emphasis on 2006, 2008 and 2009, equivalent to 41.6% (n = 52), and lower number of productions in 2001 and 2002, with only 8.8% (n = 11) studies, and the rest of the production accounting for 49.4% (n = 62) were published in other years.

Of the selected publications, it was observed that 86.4% (n = 108) were published in journals that include the field of nursing and the remaining 13.6% (n = 17) were published in general health journals.

It was observed that there was a significant number (n = 58) of review productions, including examples of all classifications, while the others (n = 67) presented several methods, describing an intervention provided by nurses in various areas. Of these, 14 were reports of experience, 13 were descriptive studies, 11 were randomized clinical trials, 10 were epidemiological studies, seven were qualitative studies, five were surveys, five were quasi-experimental studies and two were experimental studies.

There was a range of interventions provided by nurses, most notably those related to smoking cessation stage, comprising 67.2% (n = 39) of studies. Interventions related to the phase of smoking initiation were documented in 19% (n = 11) of publications and only 13.8% (n = 8) studies carried out maintenance work.

It should be noted that the studies classified as maintenance were those who described some intervention, but were not targeted directly to the smoker, for example, studies that focused on: description of smoking behavior, beliefs and practices of education, nurses’ standpoint about the attitude of smoking; analysis techniques employed in tobacco control; evaluation of
It was decided to deepen the analysis of publications involving stages of smoking initiation and cessation, as this is the main focus of the study. With respect to the countries where these interventions took place, the sample showed that 48% (n = 24) occurred in the U.S., only 4% (n = 2) were performed in Brazil and the remaining 48% (n = 24) occurred in various nations, totaling 15 countries.

A significant number of interventions were directed to the population of smokers in various scenarios, such as universities, schools and hospitals with a focus on discussion or proposition of actions for tobacco control, as well as analysis of their impact, or even the perception of this, by health care professionals and / or academics.

As outlined in Table 3, the main interventions are presented and the most updated reference are quoted in each topic listed, targeted for smoking initiation / cessation, according to the target population, and having nurses as the primary professionals involved in this process.

### DISCUSSION

According to the results obtained in the three bases selected, it appears that, in 2008, there was an increase in the number of publications related to nursing interventions for tobacco control, and a progressive reduction in subsequent years could be noticed.

It is perceived that the most frequent nursing interventions were those aimed at smoking cessation, followed by actions related to smoking initiation. That is worrisome considering that, to reduce the incidence of smoking in the world, the best strategy would be to prevent initiation, considering the growing participation of adolescents in smoking and failure of cessation programs targeted to this audience.

For interventions aimed at cessation, we observed that only 6% (n = 3) mentioned the use of medication associated with cognitive behavioral therapy. There is evidence that pharmacologic therapy combined with counseling and support is more effective and increases success rates in the process of smoking cessation.
### Table 3. Analysis of the publications that reported an intervention directed at the initiation and / or the phase of smoking cessation according to the target audience

<table>
<thead>
<tr>
<th>Intervention</th>
<th>Number of Publications</th>
<th>Phase of treatment of smoking</th>
<th>Audience</th>
</tr>
</thead>
<tbody>
<tr>
<td>Creation of a specific program</td>
<td>16</td>
<td>C, I</td>
<td>T, G, N, CI, PW / PPW, H</td>
</tr>
<tr>
<td>Counseling</td>
<td>8</td>
<td>C, I</td>
<td>T, PW/PPW, H, N, CI</td>
</tr>
<tr>
<td>Use of lectures</td>
<td>6</td>
<td>C, I</td>
<td>T, N</td>
</tr>
<tr>
<td>Use of a questionnaire for evaluation and further action</td>
<td>4</td>
<td>C, I</td>
<td>G, N</td>
</tr>
<tr>
<td>Telephone interview</td>
<td>4</td>
<td>C, I</td>
<td>PW /PPWP, H, G</td>
</tr>
<tr>
<td>Evaluation of efficacy</td>
<td>2</td>
<td>C.</td>
<td>T, G</td>
</tr>
<tr>
<td>Advice together with pharmacotherapy</td>
<td>2</td>
<td>C.</td>
<td>G, N</td>
</tr>
<tr>
<td>Attendance at clinic</td>
<td>1</td>
<td>C.</td>
<td>G</td>
</tr>
<tr>
<td>Multi-component treatment</td>
<td>1</td>
<td>C.</td>
<td>G</td>
</tr>
<tr>
<td>Cognitive behavioral therapy</td>
<td>1</td>
<td>C.</td>
<td>PW/PPW</td>
</tr>
<tr>
<td>Using the literature combined with monitoring</td>
<td>1</td>
<td>C.</td>
<td>H</td>
</tr>
<tr>
<td>Interview followed by monitoring</td>
<td>1</td>
<td>C.</td>
<td>H</td>
</tr>
<tr>
<td>Creation of a monitoring program</td>
<td>1</td>
<td>C.</td>
<td>H</td>
</tr>
<tr>
<td>Counseling together with pharmacotherapy and following</td>
<td>1</td>
<td>C.</td>
<td>G</td>
</tr>
<tr>
<td>Counseling followed by monitoring</td>
<td>1</td>
<td>C.</td>
<td>G</td>
</tr>
</tbody>
</table>

Caption: i = Initiation, C = Cessation, T = Teenager, G = general, N = Nurse / Nursing Student, CI = Chronically ill, PW / PPW = Pregnant women / postpartum women, H = Hospitalized Patient.
Currently, pharmacotherapy is used as a support and serves to facilitate the cognitive behavioral approach, which is the basis for smoking cessation. There are, at this time, some medications of proven effectiveness, mainly nicotine replacement medication, which is considered top-notch drugs.

Community nurses are well positioned to intervene with smokers, and currently nicotine replacement products are in the recipe form of these professionals.

Regarding countries where these interventions occurred, the U.S. is at a prominent position, accounting for almost half of the sample of publications. In this country, even with advances in educational campaigns to control the disease in recent decades, there are more than 45 million smokers and approximately 440,000 deaths per year.

Considering the demand of smokers in the U.S., it is extremely important that nurses adopt the evidence-based practice to aid in smoking cessation, thereby contributing to the reduction of approximately 157 billion dollars in health costs per year.

In publications that focused on interventions for tobacco control in hospital environments, it was observed that 37.5% of these reported the maintenance of monitoring actions after discharge with a continuing professional approach to adults, adolescents, parents of sick children, and patients of heart and lung diseases.

In the publications assessed, studies that performed counseling alone or in combination with pharmacotherapy with nicotine replacers, with or without contact after discharge were found.

In a meta-analysis made by Rigotti et al., the authors found that counseling of patients for smoking cessation done by nurses during the hospital stay, with maintenance of contact for over a month after discharge increased the chances of success by about 65% since a 6-12-month follow-up after hospitalization is recommended. The same authors point out that there is no evidence that the counseling intervention, carried out only during hospitalization, is effective in promoting smoking cessation. Counseling intervention is effective when given to all hospitalized smokers, being held in an intensive and prolonged way.

Counseling and nicotine replacement therapy should be provided to all hospitalized smokers who are motivated to try to quit smoking. For those who are not motivated, this is a favorable time and an excellent opportunity for nurses starting the approach.

With regard to interventions aimed at women, there is the opportunity to approach smokers during the cervical screening test performed by the nurse. Concerning the interventions aimed at pregnant women, half of the studies that targeted this audience advocated for the maintenance of contact started during pregnancy until the postpartum period, aiming to prevent relapse.

These interventions are characterized by counseling alone, either by telephone or home visit, or the adoption of a counseling approach associated with nicotine repository drugs. This finding corroborates the U.S. guidelines regarding the treatment of tobacco directed to pregnant women, which recommends counseling for smoking cessation associated with drugs, starting with short duration NRT.

In this sense, the findings suggest that nurses are aware that smoking poses a threat to the health of the fetus and neonate, in view of the various interventions targeted to pregnant and postpartum women. This fact suggests that the gestational and postpartum period seem to be moments of extreme sensitivity to quit smoking.

Another approach found in the publications was related to interventions targeting smokers with some kind of chronic disease, such as: chronic obstructive pulmonary disease (COPD), cardiovascular disease and cancers of the lung and head/neck.

Considering that smoking is a well-established risk factor for cardiovascular disease, it was found that nurses in this specialty proved themselves to be concerned with this situation, due to the number of actions related to these clients. Accordingly, the poor production of nurses in oncology is extremely worrisome, given that smoking is a risk factor for the development of several cancers.

Among the studies that included adolescents in the sample, we could notice that only a few of them were aimed at preventing smoking initiation. That shows that the approach to the subject should start from childhood.

Several studies have shown that smoking initiation occurs primarily between late childhood and young adolescence. Furthermore, the majority of smokers reports that they began smoking in adolescence when it is not perceived as a health risk.

Nurses can contribute significantly in reducing the incidence of smoking initiation among young people, once they are considered as the main health professionals involved in education.

No intervention targeted at the elderly was noted in this sample, which shows disagreement with the recommendations, by which all smokers of any age should be benefited from the interventions for smoking cessation.

It has been reported in the literature that these interventions are offered to seniors at rates below the ideal; however, it is stated that clinical nurses have a great opportunity to promote smoking interventions for this age group.

Many publications have focused on targeted interventions for nursing students and nurses with the purpose of contributing to this professional training, mentioning the need to approach the topic in the curriculum structure.
Clearly, the approaches and the credibility of future nurses and health professionals as agents for the treatment of smoking and tobacco-related diseases can be influenced by smoking. This shows a need for greater awareness of these future professionals in order to be primarily responsible for controlling this epidemic.

It was found that the methodological option of randomized studies targeted to nursing interventions for tobacco control was poor. On this finding, it is suggested that evaluative research in this area of nursing, from the perspective of effectiveness be carried out, given that the nurse is an active health care professional in the control of tobacco-related diseases.

**CONCLUSION**

During the nursing practice in tobacco control, intense motivation is needed to overcome the challenges encountered during this process, especially for specialists in oncology.

In this sense, an innovative action was the creation of a site called "Tobacco Free Nurses", sponsored by the American Nurses Association, which aims to provide instructional material to support the educational initiatives by nurses having in mind the development of interventions related to tobacco control.

We highlight the inclusion of smoking on the agenda of discussions and projects of the International Society of Nurses in Cancer Care (ISNCC), promoting trainings and updating for oncology nurses, focusing on interventions directed at smoking cessation.

We were able to identify that, although nurses spend a considerable time with patients / families, working directly in the process of health education, we realized the need for targeted interventions to prevent initiation of smoking, with subsequent reduction in the incidence of the disease.

This study provided an overview about nursing interventions for tobacco control, but it had limitations in terms of CINAHIL database references, for reasons explained above, without, however, having affected the scope of results.

It was found that smoking is a promising area for nurses’ activities at all levels of care. In Brazil, such insight becomes crucial, since the country has a national program to fight smoking with the possibility of training for these professionals.

**CONTRIBUTIONS**

All authors contributed to all phases of the study design, methodological design, data collection and analysis, critical revision and final writing.

**Declaration of Conflict of Interest:** Nothing to Declare.

**REFERENCES**

**Resumo**

**Introdução:** O tabagismo é considerado um grave problema de Saúde Pública e o enfermeiro é um profissional importante no desenvolvimento de estratégias relacionadas ao controle dessa doença. **Objetivo:** Identificar as intervenções de enfermagem relacionadas ao controle do tabagismo. **Método:** Trata-se de uma revisão integrativa. Realizou-se a busca de artigos e resumos publicados no período de 2000 a 2010, nas bases de dados LILACS e MEDLINE, por meio dos seguintes descritores: enfermagem/tabagismo, tobacco/nursing; e artigos publicados na CINAHL, no período de 2008 a 2010, através dos descritores tobacco/nursing/intervention. **Resultado:** Seguindo as estratégias definidas para o estudo, a busca resultou em 1.394 publicações. Foram encontradas 55 publicações no LILACS, 1.231 no MEDLINE e 108 na CINAHL. Dessas produções, foram selecionados seis artigos completos na base latino-americana e 119 nas bases internacionais, sendo 16 artigos completos na CINAHL e 103 produções no MEDLINE. A primeira análise verificou que 1.269 publicações não estavam relacionadas especificamente com a questão norteadora, ou não atendiam aos critérios de inclusão propostos, restando; portanto, 125 produções que foram definitivamente consideradas para esse estudo. Os achados evidenciaram diversas intervenções prestadas por enfermeiros para públicos variados, sendo que 39 delas foram direcionadas à cessação do fumar. **Conclusão:** Diante das produções avaliadas, verificou-se que o enfermeiro é um profissional de extrema importância no controle do tabagismo e as intervenções encontradas mostraram relação com o recomendado pela literatura científica. **Palavras-chave:** tabagismo; enfermagem; estudos de intervenção; abandono do hábito de fumar

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**Resumen**

**Introducción:** El tabaquismo es considerado un grave problema de salud pública y el enfermero es un profesional importante en el desarrollo de estrategias relacionadas al control de esa dolencia. **Objetivo:** Identificar las intervenciones de enfermería relacionadas con el control del tabaquismo. **Método:** Se trata de una revisión integradora. Fue hecha la búsqueda de artículos y resúmenes publicados en el período de 2000 a 2010, a partir de las bases de datos LILACS y MEDLINE por medio de los siguientes descriptores enfermería/tabaquismo y tobacco/nursing y artículos publicados en la CINAHL en el período de 2008 a 2010, por medio de los descriptores tobacco/nursing/intervention. **Resultados:** A partir de las estrategias definidas para el estudio, la búsqueda resultó en 1.394 las publicaciones. 55 publicaciones se encuentran en LILACS, 1.231 en MEDLINE y 108 en CINAHL. De las producciones, seis trabajos completos se seleccionaron en la base de América Latina y 119 en las bases de datos internacionales, 16 artículos completos en CINAHL y 103 producciones en MEDLINE. La primera análisis encontró que 1.269 publicaciones no estaban relacionados específicamente a la pregunta de investigación o no cumplían los criterios de inclusión propuestos, dando como resultado, 125 producciones que se consideraron finalmente para este estudio. Los hallados evidenciaron diversas intervenciones prestadas por enfermeros para públicos variados, siendo que 39 de ellas fueron encaminadas a cesación del fumar. **Conclusión:** Delante de las producciones evaluadas, se verificó que el enfermero es un profesional de extrema importancia en el control del tabaquismo y las intervenciones encontradas mostraron relación con el recomendado por la literatura científica. **Palabras clave:** Tabaquismo; Enfermería; Estudios de Intervención; Abandono del Hábito de Fumar