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Smoking Cessation Clinic, Hospital's Participation in Supporting a Quit Smoking Program: A Systematic Review

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Abstract

Smoking is a major cause of death worldwide. Analysing smoking cessation clinics as one of the facilities to support the success of smoking cessation in hospitals is the purpose of this systematic review; here will be obtained what methods are used and the effects of these methods in helping smokers quit smoking. This is a systematic review based on PRISMA protocol retrieved from online database such as ProQuest and Emerald. Eight journal articles were chosen as eligible library to be reviewed for qualitative synthesis. Two out of eight articles used counselling therapy as a smoking cessation method, while two other articles used pharmacotherapy, Nicotine Replacement Therapy (NRT), in addition to counselling therapy. Four other articles mention the advantages of having a smoking cessation clinic (SCC) in a hospital. As conclusion, effective counselling can result in behaviour change. The use of NRT combined with counselling can lead to the length of abstinence from smoking. The existence of SCC as an independent unit in the hospital is a strategy to increase the success of smoking cessation. SCC can meet the needs of every patient in their efforts to quit smoking. The suggestion that maintaining continual abstinence should be evaluated and monitored.

Keywords: smoking cessation clinic, smoking cessation in hospital, smoking cessation, quit smoking, stop smoking program

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1. Introduction

WHO in 2004 released a fact that 5.1 million people died from tobacco-related diseases worldwide [1], which than in 2008 increased to 5.4 million people, including cancers, cardiovascular diseases, and other chronic conditions [2, 3] Globally, smoking causes approximately one in ten deaths, and by 2030 this figure expected to rise to one in six, or around 8–10 million deaths each year [3, 4].

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Peer pressure, social values, media influence, and somehow genetics may result in the adoption of smoking. Some other factors may include the person's curiosity, feeling of being mature and more social, a way to get relief from social pressures, feel modern and wealthy [1].

Smoking is preventable [1, 4, 5]. Many factors affect tobacco quit rate [3], such as intensive counselling intervention when provided to all hospitalized smokers, regardless of admitting diagnosis [6].

Cigarette smoking is a major independent risk factor for recurrent stroke and has been identified as an important treatment for all patients at high risk of future stroke. Stroke and Transient Ischemic Attack (TIA) patients who quit smoking reduce their relative risk of stroke recurrence by 50% [7].

Smoking cessation is more effective than any other medical regimen or modality for secondary prevention of Coronary Heart Disease (CHD). Smoking cessation is one of the most important factors in reducing premature death among cardiac patients. It decreases mortality by 36%, non-fatal reinfarction by 32%, and repeated coronary artery bypass graft rates over 50% [5, 6].

Indeed, preventive strategies are gold standard [1]. Finding new techniques for quitting smoking may be helpful in accommodating what the smoker hopes to accomplish and what is capable of, since most smokers have repeatedly attempted to quit but with no success. Harm reduction methods focus on reducing the harmful effects of tobacco products, rather than emphasizing nicotine withdrawal syndrome. These methods are designed to establish a temporary reduction in the number of cigarettes smoked by those who are unable to quit completely [4]. In addition, smoking cessation is cost-effective compared to other interventions [6].

As a developing country with limited resources, focusing on hospital environment and healthcare professionals would be one of the best strategies for smoking cessation. From a healthcare provider's perspective, a smoke-free hospital with no smoking doctors may encourage patients not to smoke. The likelihood for a patient to smoke may also be reduced if he/she visits a hospital with signs that ban smoking. When interacting with patients; non-smoking physicians will set a good role model for patients. Doctors with anti-smoking training may be more likely to provide counselling to help smoking patients to quit [2].

In New Zealand, a Smoking Cessation Guidelines published in 2007 provides a guide for health professionals on how to treat smokers. The Health Target, Better help for smokers to quit, introduced into the health system in 2007/2008 is based on the ABC model, designed to prompt providers to routinely Ask about smoking status as a clinical

'vital sign', then provide Brief advice and Cessation support to current smokers. Many primary care providers deliver smoking cessation services. There is strong evidence that specialist smoking cessation clinics reduce smoking prevalence with long-term quit rates of 40% or more evident in overseas clinics. Smokers who use these services are four times more likely to quit than those who quit without such assistance [8].

There are multiple challenges to the clinical treatment of tobacco dependence. Non-adherence to medications and counselling is common and reduces the chances that smoking cessation will be successful [9]. With the challenges and barriers facing such patients in smoking cessation, it is important to provide accessible and individualized tobacco treatment for these patients at point of contact with healthcare services [5].

The aim of this systematic review is to analyse smoking cessation clinics as one of the facilities to support the success of smoking cessation in hospitals, here will be obtained what methods are used and the effect of these methods in helping smokers quit smoking.
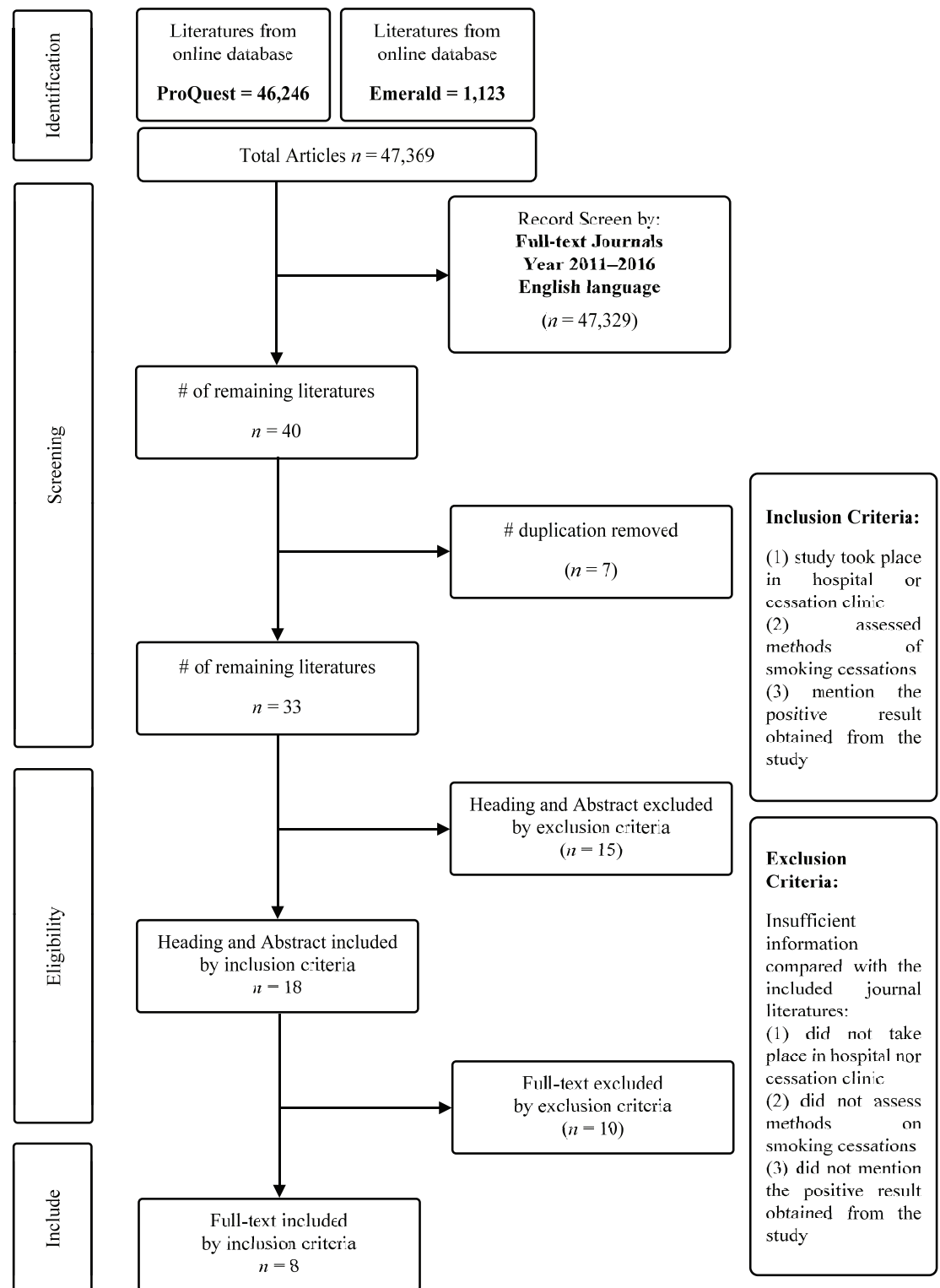
2. Methods

This systematic review is based on Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) statement guidelines in reporting the results of this systematic review. PRISMA is an evidence-based minimum set of items, aims to help author to improve the reporting of systematic reviews and meta-analyses [10].

Article search started on October 26 to 28, 2016 using several online journal database: ProQuest and Emerald (as shown in Figure 1). Keywords used on searching process were 'smoking cessation clinic', 'smoking cessation in hospital', 'smoking cessation', 'quit smoking', and 'stop smoking program'. The next question begins with restricted filtered year between 2011–2016, then filtered by language in English, then filtered again by Full Text Journal Literature. Eight journal articles were chosen as eligible library to be reviewed for qualitative synthesis.

Each of the article is appraised from its study method and period, results obtained, kind of intervention mode, advantages and disadvantages of the intervention method.

2.1. Inclusion and exclusion criteria

Studies were included and assessed for the eligibility in this systematic review if they (1) study took place in a hospital or a smoking cessation clinic, (2) assess the methods of smoking cessations, and (3) mention a positive result obtained from the study. Studies

Figure 1: Study selection flow diagram, adapted from the Preferred Reporting Items for Systematic Reviews and Meta-Analysis (PRISMA) statement guidelines.

were excluded if the libraries that insufficient information to be compared with the other articles, also if they (1) did not take place in a hospital nor clinic, (2) did not

assess methods of smoking cessations, and (3) did not mention a positive result out of the study.

3. Results And Discussion

3.1. Study selection

On identification, a total of 47,369 journal articles (ProQuest 46,246; Emerald 1,123) were gathered. Out of these 47,369 journal articles, 47,329 screened using engine filter, provided by each source of online journal database, 40 journals were deemed relevant, then assessed manually for duplication and similar studies, which comes down to 33 journals. Next step is manually assessed for eligibility by inclusion and exclusion criteria, first by heading and abstract, leaving 18 journals; then read the full text journal, which then remaining 8 journal articles for qualitative synthesis.

3.2. Characteristics of included studies

In this systematic review, author reviewed 8 journal articles. Four studies took place in hospital, one study in a hospital which already have a smoking cessation clinic facility, and three other studies took place in a smoking cessation clinic.

The study methods from the articles reviewed varies, methods mentioned are mixed methods design, retrospective review, cross sectional design, cluster randomized controlled trial, pre-post design interventional study, pre-post field trial study. Although one last journal did not mention clearly about the method being used, only briefly mention that the patient were recruited through an intercept method. All 8 studies mention there has to be a strategy to influence a person to quit smoking.

3.3. Assessment

Out of the 8 journal articles reviewed, two of which were using counselling therapy to perform the smoking cessation service, and two other studies used pharmacotherapy in addition to the counselling.

Meanwhile, four remaining articles performed their studies in an institution that has been equipped with smoking cessation clinic. Those four articles mention that smoking cessation clinic as a separated unit in a hospital, independently able to determine the service and facilitate patient and perform the quit smoking program.

The strategies as mentioned briefly earlier, to support smoking cessation service obtained out of this systematic review, (as shown in Table 1) are:

3.3.1. Counselling

According to study by Karl, D. A. et al. (2016) hospitalization has been identified as a 'teachable moment' for many smokers. Unit nurses should receive training on the art of negotiating behaviour change with inpatients at differing levels of readiness to quit (using techniques such as motivational interviewing) [11]. Moreover, better channels of communication between inpatient service and the primary care team are needed. Another study by Zhou, D. et al. (2012), resulted in among 81 smoking patients, 48 (59.3%) reported smoking cessation counselling from a physician, 23 (28.4%) were provided with smoking cessation counselling brochures, 42 (51.9%) were recommended to accept quitting services, 1 (1.2%) was prescribed smoking cessation medication, and 3 (3.7%) were referred to a smoking cessation clinic (SCC) [2].

In counselling, healthcare professionals provide information about the ingredients of cigarette and the dangers of smoking, especially for patients with serious and chronic illness. That is the role where healthcare professionals in motivating patients to quit smoking. Patient can describe the barriers they experience on the difficulties on quitting smoking that is where the interactions and negotiation take part on educating and motivating the patients.

Counselling may be easily done if the patient already have the good intention to quit smoking. But some other times there are difficulties in delivering the counselling service by healthcare professionals, such as the lack of patient interest to listen. This may be a trigger for the counsellor to evaluate the method of counselling service to be more interesting presentation, such as using posters, other props or visual aids while doing the counselling.

3.3.2. Use of pharmacotherapy in addition to the counselling

According to study performed by Papadakis, S. et al. (2011), cessation medications such as nicotine replacement therapy (NRT) bupropion and varenicline combined with counselling, can double or triple long-term smoking abstinence in smokers. Consequently, stroke prevention guidelines recommend that healthcare providers strongly

TABLE 1: Strategies to support smoking cessation service obtained out of this systematic review.

Author and Year of Publication	The Title of the Journal	Location and Period of Study	Study Method	Variable	Analysis	Result	Advantages	Disadvantages
Katz, DA, et al., 2016	'Let Me Get You a Nicotine Patch': Nurses' Perceptions of Implementing Smoking Cessation Guidelines for Hospitalized Veterans David	In the inpatient medicine units of four Veterans Affairs (VA) hospitals; –	Mixed methods design	Dependent variable: Smoking Cessation Guidelines for Hospitalized Veterans David Independent variable: – skills in cessation counselling – multiple behavioural and organizational barriers to guideline adherence – train inpatient staff how to negotiate behaviour change	Our analysis revealed several knowledge-related, attitudinal, behavioural, and organizational barriers to guideline adherence that may have limited the overall impact of the intervention	Following the intervention, only 45% rated this factor as a very important determinant of their decision to provide cessation counselling On the postintervention survey, 47% of nurses rated themselves as moderately to very effective in cessation counselling	This evaluation demonstrates the feasibility and acceptability of an enhanced academic detailing intervention to improve tobacco treatment by unit nurses in VA hospitals Perceived self-efficacy and normative beliefs about the nurse's role in promoting smoking cessation also influenced adherence to the guideline	A limitation of this study is that we did not elicit the views of nurses who declined to participate in the in depth interview; these nurses may have expressed alternative views of the intervention. We also did not obtain the perspectives of institutional leaders, senior managers, and other key stake-holders. Finally, this study was limited to internal medicine units in 4 VA hospitals in the United States, and the results cannot be generalized to all VA and non-VA hospitals.

Author and Year of Publication	The Title of the Journal	Location and Period of Study	Study Method	Variable	Analysis	Result	Advantages	Disadvantages
Khara, M, et al., 2013	A Retrospective Review of Pilot Outcomes from an Outpatient Tobacco Treatment Programme Within Cardiology Services	Smoking Cessation Clinic (SCC) *cardiology services at the Vancouver General Hospital (VGH)*; Sept. 2010 to May 2012	Retrospective review	Dependent variable: Smoking Cessation Independent variable: The modest outcomes from this pilot study support the need for tobacco treatment in hospital cardiology settings	Providing evidence-based approaches to tobacco treatment within cardiology services is feasible and well received by patients with cardiac and other co-morbidity. The modest outcomes from this pilot study support the need for tobacco treatment in hospital cardiology settings.	35% of participants achieved smoking cessation, whereas 42.1% reduced their cigarette consumption. In multivariate regression analyses, salient predictors of smoking cessation included being male and a greater length of visiting the smoking cessation clinic.	to provide a comprehensive Programme evaluation of the processes, impacts, and effects of a 'longitudinal approach' to tobacco treatment on tobacco cessation outcomes, re- hospitalizations, mortality, and quality of life among individuals with comorbid chronic disorders accessing tobacco treatment – the Smoking Cessation Clinic (SCC) currently provides individualized tobacco treatment within cardiology services at the Vancouver General Hospital (VGH)	The observational nature of this study limits the generalisability of this study. Although smoking cessation was verified using expCOmonitoring, the follow up telephone calls to verify sustained abstinence were based on self-report. Although the use of 7-day point-prevalence abstinence is an accepted methodology in verifying smoking cessation, it does not necessarily reflect long-term cessation We are limited by the measures available in participant's charts. There are other variables which could have influenced smoking cessation outcomes (such as education level) which were not available for analysis. Our analysis may be restricted by the low (n = 117) sample size, particularly in the logistic regression analysis.

Author and Year of Publication	The Title of the Journal	Location and Period of Study	Study Method	Variable	Analysis	Result	Advantages	Disadvantages
Abu-Baker N, et al., 2010	Smoking Behaviour among Coronary Heart Disease Patients in Jordan: A Model From a Developing Country	In the city of Irbid, in northern Jordan. – outpatient clinics of King Abdullah University Hospital – Princess Basma Educational Hospital; 2007 (Data collection took about three months, May to July 2004)	Descriptive cross-sectional design	Dependent variable: The frequency of cigarette smoking before and after diagnosis of Coronary Heart Disease (CHD) Independent variable: systematic intensive smoking cessation programs to maintain and promote CHD patients' motivation to quit smoking	Descriptive statistics were performed to describe all variables. Chi-square was used to investigate the association between the study variables. T-test was used to study the differences between the mean of cigarettes smoked before and after disease occurrence. The significant of the association was tested at an alpha level of ≤ 0.05.	There was a significant difference in the number of cigarettes smoked before CHD occurrence, t (101) = 19.11 P < 0.01, and the diagnosis of CHD occurrence, t (101) = 13.62, P < 0.01. The results of the current study showed that there is a statistically significant association between age and smoking behaviour after CHD occurrence. In general, Persistent smokers were younger than quitter smokers, which may indicate that older participants were more aware of their health than younger patients. The results showed that the he first two reasons for not quitting were 'loss of a way to handle stress' and 'have a history of depressive symptoms'.	This study's results provide important baseline information about frequency of smoking before and after diagnosis of (CHD) and detect the reasons that discourage patients from quitting smoking and the resources available to patients that might help them quit smoking. The implementations of systematic strategies that institutionalize cessation services are needed; these may include training health care providers to deliver effective treatments, including tobacco dependence pharmacological treatment	Another limitation of this study was the use of a cross-sectional study design rather than a longitudinal or clinical trial; therefore, causal associations cannot be assumed. Also, there is a greater likelihood that patients who are heavier smokers may not have been in the sample because of smoking related deaths.

Author and Year of Publication	The Title of the Journal	Location and Period of Study	Study Method	Variable	Analysis	Result	Advantages	Disadvantages
Papadakis S, et al., 2011	Open Access Research A randomized controlled pilot study of standardized counselling and cost-free pharmacotherapy for smoking cessation among stroke and TIA patients	The Ottawa Hospital Stroke Prevention Clinic, Ottawa, Ontario, Canada; –	Cluster randomized controlled trial	Dependent variable: The decisions to use pharmacotherapy among patients who have experienced TIA or stroke Independent variable: financial barriers	Adjusted analyses were conducted to account for baseline differences between groups. Treatment adherence and patient quit attempts were also compared between treatment groups. All patients were included in the intention to treat analysis. Missing data were categorized as active smoking (smoking abstinence), not having made a quit attempt (quit attempts) or non-compliant with medications (adherence).	A systematic review including three trials examining the benefit of covering the cost of smoking cessation treatment (primarily the cost of pharmacotherapy) found that cost-free treatment increased the odds of achieving abstinence (OR 1.6; 95% CI 1.2 to 2.2) compared to having smokers pay for their own treatment Providing cost-free effective smoking cessation pharmacotherapies to smokers in primary care increased the odds of quitting 12months after recruitment almost fivefold (OR 4.77; 95% CI 2.0 to 11.2)	30% of the study sample had indicated on the waiting room screening form that they were not ready to quit in the next 30 days, making cost-free medications available to patients who receive standardized smoking cessation interventions will enhance patient quit attempts, remove barriers related to the cost of pharmacotherapy, and enhance compliance with the full course of pharmaco- therapy among patients and lead to increased success with quitting.	Despite positive trends, the pilot study was small and included only 28 participants, and was not able to document a significant effect of the intervention compared to control.

Author and Year of Publication	The Title of the Journal	Location and Period of Study	Study Method	Variable	Analysis	Result	Advantages	Disadvantages
Sharifi H, et al., 2012	Efficacy of Harm Reduction Programs among Patients of a Smoking Cessation Clinic in Tehran, Iran Hooman	Centre's Smoking Cessation Clinic in Tehran, Iran; 2008–2009	pre-post design interventional study observational study	Dependent variable: Smoking Cessation Independent variable: Harm Reduction Programs	First, the estimated prevalence was calculated for all variables through numbers, percentages, means and standard deviations. Second, in order to determine the efficacy of the intervention, the Wilcoxon rank test was used since two outcome variables (number of cigarettes and nicotine gums used per day) did not have normal distributions as shown by the Kolmogorov–Smirnov test. Pearson's chi-square test was used to determine the efficacy of intervention in decreasing CO levels. All data were analysed using SPSS version 17.0 software. Statistical tests used were two-tailed with 5% significance level	A total of 87.1% of the subjects were males. We noted decreases in the number of cigarettes smoked daily and the level of expired CO, whereas the amount of nicotine gum used significantly increased during the time interval between the first session and the third and sixth month follow-up visits ($p < 0.001$ for all variables). During the follow up sessions, 64.4% of subjects reduced the number of cigarettes they smoked daily by at least 50% and 12.9% of subjects quit smoking	– This study's strengths include the presence of detailed data on smoking pattern and biochemical measures of smoke exposure. – The report of smoking prevalence in a 6-month period instead of point prevalence at the end of a conventional treatment, which is a less relevant outcome. – The results of this study support the efficacy of harm reduction programs. – In our study, the gradual reduction in smoking was followed by a 12.9% successful quit rate – In this study, reduction in expired CO levels and number of daily cigarettes is statistically significant – In the present study our participants were smokers who had failed to quit	prolonged observation is not included in conventional smoking cessation programs

Author and Year of Publication	The Title of the Journal	Location and Period of Study	Study Method	Variable	Analysis	Result	Advantages	Disadvantages
Abdolahin A, et al., 2012	Correlation between the Age of Smoking Initiation and Maintaining Continuous Abstinence for 5 Years After Quitting	smoking cessation clinic of the Iranian Anti-Tobacco Association; 2005–2010	pre-post field trial study	Dependent variable: Maintaining Continuous Abstinence for 5 Years After Quitting Independent Variable: age of smoking initiation	SPSS software was used. Quantitative variables were recorded as mean and qualitative variables as percentage; t-test was used to evaluate the correlation between age, age of start smoking and mean degree of nicotine dependence (FT), and abstinence or smoking rate after 5 years. Chi-square test was used to evaluate correlation between number of daily cigarette smoking and abstinence after 5 years. Logistic regression was used to evaluate the joint relationship of all the variables considered to have an impact on smoking cessation. $P < 0.05$ was considered statistically significant.	Age of smoking initiation in those who continued their abstinence after 5 years was 21.9 ± 5.3. This rate was 20.7 ± 5.3 in failed cases ($P = 0.04$). The number of daily cigarettes according to cessation results after 5 years	Another important finding in our study was abstinence rate after 5 years (27.8%) which was considerable. Hymowitz et al. reported 20.3% cessation rate during the first 12 months after quit date (21)	Subjects voluntarily attended the smoking cessation clinic courses; therefore, they were already motivated to stop smoking. A similar study has to be done on all smokers regardless of their motivation for quitting smoking. In addition, according to the type of study we could not confirm a causative association between age of smoking initiation and quit rate and abstinence. In conclusion, starting smoking at older age could be associated with successful quit attempts and holding on to abstinence in the future

Author and Year of Publication	The Title of the Journal	Location and Period of Study	Study Method	Variable	Analysis	Result	Advantages	Disadvantages
Vahidi RG, et al., 2014	Factors Affecting Successful Smoking Cessation: Patient Views Regarding Determinants of Successful Smoking Cessation– A study from East Azerbaijan, Tabriz – Iran	two smoking cessation centres of Tabriz; –	cross-sectional study	Dependent variable: Smoking Cessation Independent variable: – Worrying about getting ill in the future – Side effects of smoking heard – While peer pressure – Cost of cigarettes	This program contains at least 4 face to face individual and group counselling and behavioural techniques of smoking cessation along with family members. Validity of the study questionnaire was confirmed through an experts' panel by 10 experts and its reliability was confirmed through a pilot study based on Cronbach's alpha index (α = 0.754). Frequencies and percentages were used to describe demographic information of participants and mean (standard deviation) were used to report continuous variables. Data were analysed using the Statistical Package for Social Sciences, SPSS version 11.0	Our study showed that worrying about getting ill in the future (95.4%), the side effects of smoking heard or observed (94.5%) were ranked the most important factors; while peer pressure (24.3%) and cost of cigarettes (17.2%) were the least important determinants of successful smoking cessation.	Smoking cessation program was designed to help the individual to recognize and cope with the problems that occurred during smoking cessation	– Personality traits of participants – Did not use statistical methods to find relation between demographics, social and emotional factors with success in smoking cessation

Author and Year of Publication	The Title of the Journal	Location and Period of Study	Study Method	Variable	Analysis	Result	Advantages	Disadvantages
Zhou D, et al., 2012	Anti-smoking practice in hospitals An intercept survey among patients in Hubei Province, China Dunjin	13 hospitals of Hubei province, China, hospitals are smoke free; –	intercept patient sample surveys	Dependent variable: restrict tobacco u Independent variable: – Smoking cessation by health professionals such as physicians – Significantly more doctors and nurses smoke, – Significantly fewer physicians provided anti-tobacco counselling services – The lower levels of education – Hospital settings, enforcement of tobacco control policies and regulations for smoke-free hospitals and smoke-free doctors, and provisions for anti-tobacco counselling	For quality control purposes, the double-entry protocol was used. Discrepancies were resolved against the hardcopy of the completed questionnaires. Descriptive statistics such as means and frequencies were used to summarize sample characteristics and to assess the variables regarding the enforcement of smoke-free hospitals and smoke-free doctors and anti-smoking counselling practices, including signs indicating smoking-bans in the hospital settings and number of doctors and nurses who smoke. Chi-square tests were used to compare observed difference in rate and proportion among patients across hospitals at different city levels. Differences in demographic factors were adjusted using logistic regression so that the adjusted rates were less likely to be biased in comparison. Statistical analyses were conducted using SPSS16.0	Among the intercepted patients, 48.3% reported having seen people smoking in hospitals; 22.3% had seen a doctor and/or nurse smoking; 23.8% had smelled tobacco in hospitals; 68.4% reported having seen 'no-smoking' signs in hospital settings; 42.6% reported having been asked about smoking status in their latest visit to a doctor and 23.8% reported receiving tobacco cessation counselling.	this study update the data regarding tobacco use in hospital settings, enforcement of tobacco control policies and regulations for smoke-free hospitals and smoke-free doctors, and provisions for anti-tobacco counselling. Findings of this study provide useful data and indicate large gaps between the current levels of tobacco use and control and the goal set by FCTC in China.	Patients included in this analysis were not randomly selected but intercepted in hospital settings. Although this method has certain validity. selection bias could not be ruled out without using a true random sample

advise every smoker who is at high risk for a stroke or TIA to quit, and provide specific assistance with quitting, including counselling and pharmacotherapy.

In line with the aforementioned article, another study performed by Abu-Baker, N. et al. (2010), offering smoking cessation counselling to all hospitalized smokers is effective as long as supportive contacts continue for more than one month after discharge. Adding nicotine replacement therapy to counselling may further increase smoking cessation rates and should be offered when clinically indicated, especially to hospitalized smokers with nicotine withdrawal symptoms.

Delivering a combination of counselling and NRT as a smoking cessation service can help patients with their quitting smoking program, a lot more greater than just counselling service, even by healthcare professionals. Using NRT means have to be under doctor's supervision, meaning there have to be a collaborative work between nurses and physicians in delivering the smoking cessation service.

3.3.3. Smoking Cessation Clinic (SCC)

According to study by Vahidi, R. G. et al. (2014), smoking cessation program was designed to help the individual to recognize and cope with the problems that occurred during smoking cessation. This program contains at least 4 face to face individual and group counselling and behavioural techniques of smoking cessation along with family members. The role of healthcare professionals is important, and 74% of participants indicated that physician advice was key determinant for successful smoking cessation [1].

An evaluation study performed by Khara, M. et al. (2013) in a Smoking Cessation Clinic in a Cardiology services at the Vancouver General Hospital (VGH) in Canada, established 2010, which at that point of time it runs full three days a week and staffed by a team of specialists in smoking dependence treatment comprising of two nurses and a physician, participants were provided pharmacotherapy include NRT (i.e., nicotine gum, patch, lozenge, inhaler or oral spray), varenicline or bupropion SR and individual counselling (i.e., brief, strategic advice employing the principles of motivational interviewing) at each clinic visit. This study is based on a retrospective review of the charts of 117 participants of the SCC being observed for 1 year and eight months period (September 2010 to May 2012). The result is 35% of participants achieved smoking cessation, whereas 42.1% reduced their cigarette consumption [5]. Given the significant morbidity and mortality related to smoking, it is crucial that hospitals provide smoking cessation services at point-of-care. The provision of smoking cessation services should

also be accompanied with adequate training and support for care providers, particularly for them that handle a hard-to-treat smokers [5].

Sharifi, H. et al. (2012) performed an observational study in SCC in Iran for one year period (2008 to 2009), observed 132 patients previously failed to totally quit smoking. The treatment procedure was started in a routinely conventional cessation program and categorized in three steps: (1) one session as a baseline assessment; (2) two sessions for gradual reduction that used 2 mg nicotine gums; and (3) two maintenance sessions (steady amount of nicotine gum and cigarettes) following two maintenance sessions that aimed at further reduction or cessation of smoking. This study shows that reduction in smoking can be achieved through prolonged counselling sessions and NRT. Smoking reduction in people unable to stop smoking immediately seems to be a step forward towards improved health and may finally proceed to complete smoking cessation. This is particularly useful for smoking cessation counsellors to know that continuation of conventional programs can augment the success rate of quitting in smokers [4].

Abdolahinia, A. et al. (2012) in his study, performed a pre-post field trial study was conducted on 398 smokers who attended the smoking cessation clinic of the Iranian Anti-Tobacco Association in 2005. A combination therapy (pharmacological and behavioural therapy) was used to help them stop smoking. In the first session, demographic information was collected by use a questionnaire and the level of nicotine dependency was measured by standard Fagerstrom test (FT), consist of six questions. They stopped smoking completely from the 3rd session by using nicotine gum and behavioural therapy under supervision of trained physician. It was based on self-report and was confirmed by measuring their expiratory carbon monoxide rate. Successful Participants (stopped smoking completely from quit date until last session) were then followed continuously for 5 years by telephone and their success or failure in maintaining their continuous abstinence was evaluated. Success means continuing not smoking even one puff after quit date for 5 years fallow up. Overall, 398 individuals were studied out of which 231 (58%) were men and 167 (42%) were women. A total of 76.6% of subjects including 172 males (74% of men) and 133 females (79% of women) succeeded at the end of the course which means they did not smoke even one puff after the quit date. Evaluation and follow up at the end of 2010 revealed that 111 (27.5%) subjects were still maintaining their continuous abstinence after 5 years [64 (27%) men and 47 (28%) women].

Performing a smoking cessation service in a form of SCC helps a lot of smoker to be able to stop, or at least reduce their addiction to smoking. From the four articles

mentioned earlier, stages and methods conducted in those studies, differ from each other, but it can be drawn into a conclusion, that combination of counselling (either by physicians or nurses) and pharmacotherapy using NRT, can reduce the frequency of smoking which eventually totally quit smoking. But it cannot stop there, a prolonged counselling cessation and continuation of conventional programs as a part of the smoking cessation service with follow-up to the patients by telephone, can maintain their abstinence on smoking, thus can augment the success rate of quitting in smokers.

In Indonesia, there are three hospitals that already have smoking cessation clinic (SCC) as an independent and separated unit, they are Persahabatan General Hospital in East Jakarta [12], Awal Bros Hospital in Pekanbaru [13], and Port Health enter Hospital in Surabaya [14]. Smoking cessation clinic in Persahabatan General Hospital provides integrated in an effort to support patients' quit smoking program. Smoking cessation concept developed is an integrated service between counselling, pharmacotherapy, and management of withdrawal effects. The patient in SCC is treated with multi-discipline healthcare providers, not only pulmonologist and internist, dentist and nutritionist also involved. There are in total of 9 experts involved in SCC [12]. In line with Persahabatan General Hospital, Awal Bros Hospital in Pekanbaru's SCC is also an integration of multi-discipline expertise. Their SCC even have their own motto "if healthy is your choice, please join our healthy community-healthy lifestyle." [13]

4. Conclusion

Effective counselling can result in a change of behaviour. The use of NRT combined with counselling, can double or triple long-term smoking abstinence in smokers. Existence of SCC as an independent and separated unit in a hospital, is a strategy to increase the success rate of smoking cessation. SCC can make their own quit smoking program independently suiting each patient's need, prolonged and continuing the counselling sessions, combining the use of NRT, and equally important, follow up on their patients even after they stopped smoking completely after their last session. Maintaining their continuous abstinence has to be evaluated and monitored.

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