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**NURSES' ROLES IN HEALTH PROMOTION PRACTICE: A  
SYSTEMATIC REVIEW**

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**ABSTRACT**

**Background:** Promoting public health is applied by health care professionals including nurses. The focus of health promotion by nurses traditionally has been on disease prevention and changing the client behavior with respect to their health. In fact, the role as promoters of health by nurses is not as simple as we perceive. It is because they have experience and multi-disciplinary knowledge of health promotion in their nursing practice.

**Aims:** This study presents a systematic review aimed at examining the findings of existing research studies (2001-2016) of health promotion roles by nurses.

**Methods:** A systematic search of databases using EBSCOhost, ProQuest, and Science Direct were conducted. The 353 articles included were extracted and verified and a new interpretation of the concepts extracted was generated.

**Results:** 12 research articles met the inclusion criteria and included in this review. Nurses play an important role in relation to health promotion in any setting like hospital, community, primary care and home care.

**Conclusion:** This review need to be confirmed by well-designed large studies which engage validated procedures of nurses' role in health promotion practice and involve multivariate analyses to make sure the real role of nurses regarding health promotion practice.

**Keywords:** nurses' role; health promotion; nurses

**INTRODUCTION**

Promoting public health is applied by health care professionals including nurses. The focus of health promotion by nurses traditionally has been on disease prevention and changing the client behavior with respect to their health. In fact, the role as promoters of health by nurses is not as simple as we perceive. Health promotion has always been an essential component of nursing care, and the traditional approach has focused on screening for diseases such as cancer and on preventing communicable disease through immunizations [1]. Motivated by the Ottawa Charter, the 1980s saw increasing attention being given to the role of supportive environments, social influences, economic resources, health inequalities, and political action in creating health [2]. One of the nurses' roles is to share information and facilitate desired lifestyle behavior change rather than to prescribe or attempt to control client behavior [3]. It is because they have experience and multi-disciplinary knowledge of health promotion in their nursing practice. Moreover nurses could practice health behaviors themselves, they could not only serve as role models but also influence their attitudes, knowledge, and skills toward health promotion [4]. Nevertheless, since the field of health promotion is too broad, there is a need to investigate the role of health promotion in nurses.

Health promotion models can provide a useful framework with which to investigate the actual and potential role of primary care professionals, including nurses. The aim of this systematic review was to collate the findings of past research studies (2001-2016) of nurses' roles in health promotion practice.

## METHODS

The systematic review was preferred because it has many benefits, including evaluating the strength of the scientific evidence, identifying gaps in current research and the need for future research, bridging between related areas of work, identifying central issues in an area, generating a research question, identifying a theoretical or conceptual framework, and exploring which research methods have been used successfully [5]. The study selection process is set out in Figure 1.

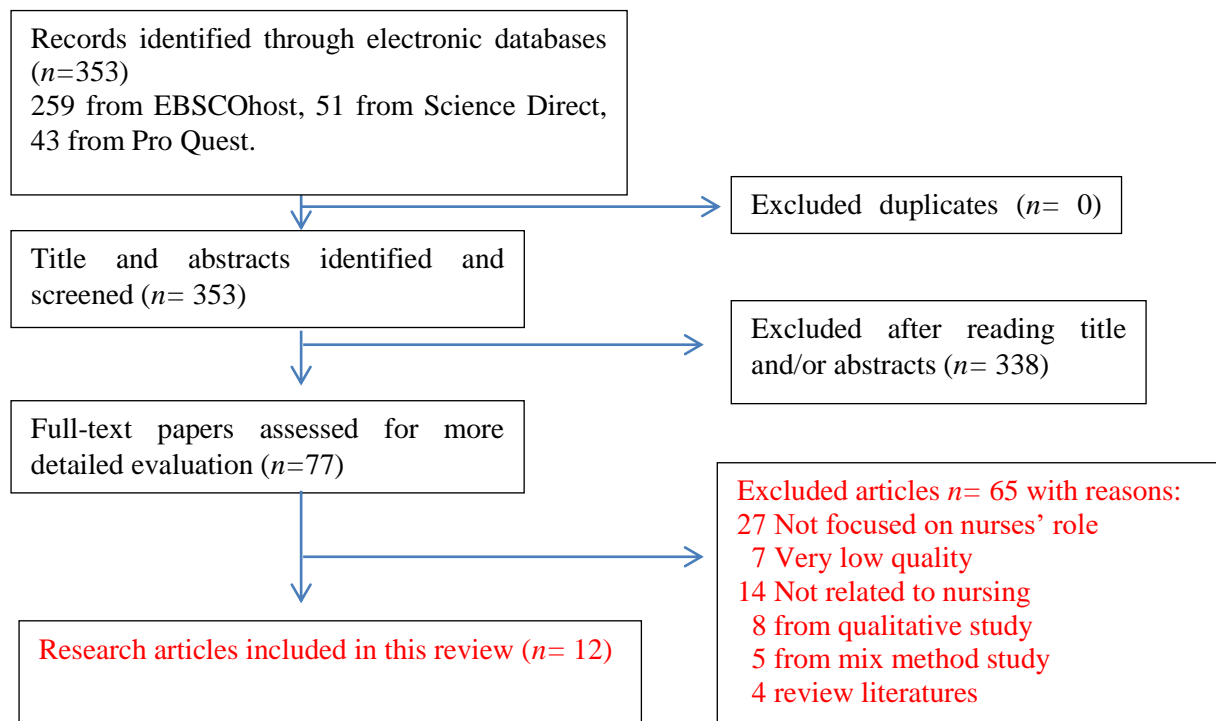


Figure 1. Flow chart of the systematic review

Several different databases were investigated to identify relevant published articles. Systematic searches of the EBSCOhost, ProQuest databases were undertaken using the search string *nurs\* AND health promotion AND practice*. The searches were limited to studies published during the period January 2001-November 2016. Meanwhile systematic searches of the Science Direct database was undertaken using the search string *nurs\* and (health promotion) AND limit to (topics, "nurse")* and found for *pub-date > 2000*. The researchers defined the inclusion criteria. Articles were reviewed if they met the following criteria: 1) original research articles; 2) reported qualified nurses' roles in health promotion knowledge or skills and/or factors that contributed to nurses' ability to implement health promotion in nursing. 3) full text; 4) English language, as the researcher has no comprehend foreign language other than English; 5) the articles had to be published in peer-reviewed journals, 6) the articles contain comparison or contrast nurses' roles in health promotion whether in between nurses or among nurses and other health professions.

Exclusion was based on the following criteria: data relating to nurses were not reported independently. No attempt was made to access unpublished studies or the ‘grey’ literature. The included studies were tabulated in chronological order under the following headings: reference and country, design and sample, instruments and data collected, aim, and key findings.

The original search acknowledged 353 references: 259 from EBSCOhost, 51 from Science Direct, 42 from Pro Quest. After duplicate papers were excluded the researcher (BW) read the titles and abstracts of the remaining 353 research papers. No specific evaluation criteria are employed when conducting a systematic review using diverse empirical sources; one approach is to evaluate methodological quality and information value [6].

## RESULTS

A total of 12 articles were included in this systematic review. The articles were methodologically very varied: three cross-sectional studies, four randomized control trials, three prospective studies, one quasi-experimental design, one observational and longitudinal study. In term of the research setting four studies were conducted in hospital, two in university / school, four were in Primary Care center, one was in home care, one was conducted in community setting. None of study was published between 2001 and 2005, three studies were published in the period of 2006 and 2010 and nine studies were published between 2011 and 2016. The design and main findings of the selected studies are reported in Table 1.

Table 1. The design and main findings of the selected studies

Authors	Title	Methods	Variabels	Results
Chiou, S. T., Chiang, J. H., Huang, N., & Chien, L. Y. (2014) (4)	Health behaviors and participation in health promotion activities among hospital staff: which occupational group performs better?	Cross-sectional survey	Participation in hospital-based health promotion activities, participation in lectures, participation in clubs/groups, physical activity and dietary behavior, and stress adaptation	Physicians reported more days of 30-minute physical activity than administrative staff and other health professionals, followed by pharmacists, who all reported more days of physical activity than nurses. Nurses had lower stress adaptation than all other groups. The rate of reporting stress adaptation as bad or very bad was 39.9% for nurses and 31% to 32% for other professional groups
Tahlil, T., Woodman, R. J., Coveney, J., & Ward, P. R. (2015) (7)	Six-months follow-up of a cluster randomized trial of school-based smoking prevention education programs in Aceh, Indonesia	Cluster randomized control trial	Smoking knowledge, attitudes, intentions and behaviours	Compared to the control group, significant long term effects were found for the health-based intervention program in improved health, Islamic knowledge and a reduction of smoking attitudes. For the Islamic-based intervention programs there was an improvement of health (and knowledge and a reduction towards smoking attitude and smoking behaviors in the past month. The effects were greater but less than additive in the combined group for health for interaction) and Islamic knowledge for interaction) but were additive for smoking attitudes. No significant effects on smoking

<b>Authors</b>	<b>Title</b>	<b>Method</b>	<b>Variabels</b>	<b>Results</b>
				intentions were observed at 6 months follow-up in the health or Islamic-based intervention programs
Harbman, P. (2014) (8)	The development and testing of a nurse practitioner secondary prevention intervention for patients after acute myocardial infarction: A prospective cohort study	Prospective cohort study	Secondary prevention intervention	Nurse practitioners (NP) delivered secondary prevention intervention can significantly improve achievement of the following target goals when compared to usual care: smoking cessation (OR 5), blood pressure (OR 15), attendance at cardiac rehabilitation (OR 7), physical activity five days a week (OR 17), physical activity five days a week (OR 34), achieving a glycated haemoglobin < 7% in those with diabetes (OR 10), triglyceride levels (p = .02), statin use at follow-up (p = .05), and number of weeks to cardiac rehabilitation (p = .05).
Leijon, M. E., Bendtsen, P., Nilsen, P., Ekberg, K., & Ståhle, A. (2008) (9)	Physical activity referrals in Swedish primary health care – prescriber and patient characteristics, reasons for prescriptions, and prescribed activities	Prospective	Physical activity referral (PAR)	The number of PARs prescribed per year in relation to the number of unique individuals that visited primary health care during one year was 1.4% in 2004 and 1.2% in 2005. Two-thirds of the combined prescriptions were issued by physicians (38%) and nurses (31%). Physiotherapists and behavioural scientists issued the highest relative number of prescriptions. The most common reasons for issuing PARs were musculoskeletal disorders (39.1%) and overweight (35.4%), followed by high blood pressure (23.3%) and diabetes (23.2%)
Tiessen, A. H., Smit, A. J., Broer, J., Groenier, K. H., & Klaas, V. D. M. (2012) (10)	Randomized controlled trial on cardiovascular risk management by practice nurses supported by self-monitoring in primary care	Randomized controlled trial	Cardiovascular risk and separate risk factors	SCORE risk assessment decreased 1.6% (95% CI 1.0–2.2) for the control group and 1.8% (1.2–2.4) for the intervention group, difference between groups was .2% (-.6–1.1). Most risk factors tended to improve in both groups. The number of visits was higher and visits took more time in the intervention group (4.9 (SD2.2) vs. 2.6 (SD1.5) visits p < .001 and 27 (P <sub>25</sub> – P <sub>75</sub> :20–33) vs. 23 (P <sub>25</sub> –P <sub>75</sub> :19–30) minutes/visit p = .048)



<b>Authors</b>	<b>Title</b>	<b>Method s</b>	<b>Variabels</b>	<b>Results</b>
Markle-Reid, M., McAiney, C., Forbes, D., Thabane, L., Gibson, M., Browne, G., Hoch, J. S., Peirce, T., & Busing, B. (2014) (11)	An interprofessional nurse-led mental health promotion intervention for older home care clients with depressive symptoms	Prospective one-group pre-test/post-test study design	Depressive symptoms, anxiety, health-related quality of life (HRQoL), and the costs of use of all types of health services at baseline and six-month and one-year follow-up	Of the 142 participants, 56% had clinically significant depressive symptoms, with 38% having moderate to severe symptoms. The intervention was feasible and acceptable to older home care clients with depressive symptoms. It was effective in reducing depressive symptoms and improving HRQoL at six-month follow-up
Tung, C. Y., Chang, C. C., Ming, J. L., & Chao, K. P. (2014) (12)	Occupational hazards education for nursing staff through web-based learning	Pre/post-test control group design	Knowledge, attitudes, and practices	After web-based learning, the experimental group had higher post-test scores than the control group in terms of knowledge, attitudes, and practices (KAP)
Wang, D., Ou, C. Q., Chen, M. Y. & Duan, N. (2009) (13)	Health-promoting lifestyles of university students in mainland China	Cross-sectional	Nutrition behavior, Social support, Life-appreciation, Exercise behavior, Health-responsibility and Stress-management	Cronbach's coefficients were greater than 0.7 in all dimensions of the AHP scale except for Nutrition behavior (0.684). Intraclass correlation coefficients ranged from 0.689 to 0.921. Splithalf reliability coefficients were higher than 0.7 in three AHP dimensions (Social support, Lifeappreciation and Exercise behavior).
Šimić, D., Bendeković, Z., Gladović, A., & Kovačić, L. (2014) (14)	Did the structure of work in the public health nurse service of the Republic of Croatia change in the period 1995-2012?	Observational and longitudinal	Visits to healthy, pregnant and postpartum women; to new-born babies; babies under the age of 12 month; small children (1–6 years) and other children; visits to chronic patients; visits to schools; and visits to patients' homes due to social and hygienic concerns, and other visits	PHN's are overloaded by a high number of visits, especially to chronic patients
Spivack, J. G., Swietlik, M., Alessandrini, E., & Faith, M.S. (2010) (15)	Primary care providers' knowledge, practices, and perceived barriers to the treatment and prevention of childhood obesity	Survey	Knowledge, current practices, perceived barriers, childhood obesity prevention and treatment	Most primary care providers' (PCPs: pediatricians, and nurse practitioners) (81%) spent 11–20 min per well visit during the first 2 years, and 79% discussed diet, nutrition, and exercise for $\geq 3$ min. Although >95% of PCPs discussed juice, fruits and vegetables, sippy cups, and finger foods during the first year, over 35% never discussed fast food, TV, or candy, and 55% never discussed exercise

Authors	Title	Method	Variabels	Results
Harris, T., Kerry, S., Victor, C., Ekelund, U., Woodcock, A., Iliffe, S., Whincup, P., Beighton, C., Ussher, M., David, L., & Brewin, D. (2013) (16)	Randomised controlled trial of a complex intervention by primary care nurses to increase walking in patients aged 60-74 years	Randomised controlled trial	Average daily step-count, average time spent in at least moderate intensity physical activity weekly,	Change in average daily steps (primary outcome) and average time spent in at least moderate intensity physical activity weekly (secondary outcome) at 3 months and 12 months, assessed by accelerometry. Other outcomes include quality of life, mood, exercise self-efficacy, injuries
Vermunt, P. W. A., Milder, I. E. J., Wielaard, F., De Vries, J. H. M., Baan, C. A., Van Oers, J. A. M., & Westert, G. P. (2012) (17)	A lifestyle intervention to reduce Type 2 diabetes risk in Dutch primary care: 2.5-year results of a randomized controlled trial	Randomised controlled trial	Body weight, glucose concentrations, physical activity and dietary intake	Both groups showed modest changes in body weight, glucose concentrations, physical activity and dietary intake [weight: intervention group,) 0.8 (5.1) kg, usual care group,) 0.4 (4.7) kg, (P = 0.69); fasting plasma glucose: intervention group,) 0.17 (0.4) mmol/l, usual care group,) 0.10 (0.5) mmol/l, (P = 0.10)].

All of the studies discovered the roles of the nurses in relation to health promotion practice in any settings. Most of the studies were conducted in Europe n=5 (2 Netherland, 1 UK, 1 Croatia, 1 Sweden), 4 studies conducted in Asia (1 China, 2 Taiwan, 1 Indonesia) and in North America n=3 (1 USA, 2 Canada).

## DISCUSSION

This review revealed a small number of relevant studies which were mainly conducted in Europe. In addition, by limited the review to published studies reported in English, full text and peer-reviewed may have excluded studies published in other languages and those in the grey literature. The purpose of this review is to examine the findings of existing research studies (2001-2016) of health promotion roles by nurses. Most of the quantitative studies revealed that nurses' role in health promotion are mostly in the prevention domain. As a role model the nurses would be followed by their patient care. Their role can be benefit as well in community setting like in supporting smoking cessation program.

Others studies specified that in the prevention domain it can be varied. Nurses can play their role in cancer prevention, prevention of occupational hazards, building self-efficacy and relapse prevention in patients aged 60–74 years [12,16].

Comparing with other professions regarding health behaviors in attending health promotion lecturers in hospital during their research Chiou et al. [4] found that nurses were less likely to come than administrative personnel. Unfortunately nurses also reported the lowest level



of physical activity, 5 a day, and stress adaptation of all occupational groups. However this study needs to be explored with other studies using more reliable design since this study only using cross-sectional survey to gain the data. In contrast to Chiou study, Harris et al. [16] noted that primary care nurses have been shown to be effective at increasing physical activity, particularly walking among the patients aged 60-74 years. It means that to some extents, nurses facing in trouble to come to lectures. We have know that nurses' time are mostly for their patients as Harris et al found that elderly can't be alone without nurses. They can increase their walking activity only because of ward nurses help.

Dealing with cardiovascular management by practice nurses, Tiessen et al. [10] concluded that both groups cardiovascular risk decreased significantly after one year of treatment. The effect size is comparable to a decrease systolic blood pressure from 160 to 120 mmHg for a non-smoking 60-year old woman with unchanged lipid level. Furthermore, Harbman [8] in Canada revealed that an Nurse Practitioner delivered secondary prevention intervention can significantly improve achievement of the following target goals when compared to usual care. Again these two studies proved that nurses play an important role as a primary care whether in prevention or in the following the hospitalisation. Nurses can be optimally deliver their services not only in the hospital but also after their patients get back home. In response to this role however one thing need to be accounted that nurses who work longer in one area need for pause for a couple of time. To support this in a correlational cross-sectional study of PHPs (physicians, nurses, nursing assistants, and community health workers) Atanes et al. [18] highlighted that nurses demonstrated lower levels of mindfulness, higher perceived stress (PS), and subjective well-being (SW) negative affect, as well as lower SW positive affect. Being at work for 1 year or longer showed a clear association with higher PS and lower SW positive affect, and no significance with mindfulness levels. Pearson's coefficient values indicated strong negative correlations between mindfulness and PS, and medium correlations between mindfulness and SW.

When nurses play their role as a counselor they can give any advices such as lifestyle counseling in smoking cessation counseling, for patients with coronary heart disease, a career, in the treatment and prevention of childhood obesity, and in Dutch primary care [8,15,17].

## **CONCLUSION**

Since nurses work in any setting like school, hospital, community, home care, primary care and other health care facilities so that nurses' role in health promotion can be varied. Nurses play an important role whether in preventive, promotive, curative, or rehabilitative domain.

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