

A Survey of the Participation of Nurses in Continuing Professional Education in Trinidad and Tobago: A Case for Chronic Disease Self-Management Education for Patients

Philip Onuoha*, Denise Israel-Richardson and Chidum Ezenwaka

The Diabetes & Metabolism Research Group (DMRG), Faculty of Medical Sciences, The University of the West Indies, Jamaica

Abstract

Aim: To assess nurses' participation in continuing medical education (CME) in Trinidad and Tobago.

Methods: 1,032 of the estimated 1,443 qualified nurses employed in the services of the Regional Health Authorities between November 2011 and April 2012 completed the self-administered research questionnaire previously pre-tested on a cohort of student nurses. The questionnaires did not contain any personal identifiers but were serially numbered to avoid receiving duplicate copies from a participant. The questionnaires were distributed to all public hospitals and health centres within the regional health authorities. The head nurse in each facility assisted in the distribution and collection of completed questionnaires from the volunteers.

Results: 1,032 nurses participated in the study. About 55.4% of the nurses were ignorant of CME. Of the 44.4% that knew about CME, only 25.9% of have had the privilege of attending some CME activities ($p < 0.05$). Again, of the 25.9% of the nurses that have attended some CME activities, most (91%) were within the country while only 5.7% CME activities were outside the Caribbean ($p < 0.05$). Interestingly, 86.7% of the nurses would like to participate in CME activities out of which 63.8% would like to be identified as specialist nurses if given the opportunity.

Conclusions: This study has shown that while a small percentage of nurses previously participated in CME activities, a significant majority (87%) indicated interest to participate in the future and even become specialist nurses. We therefore advocate that nurses' employment contracts should include incentives for continuing professional education to encourage future development of nursing profession.

Keywords: Continuing medical education; Disease self-management; Developing countries; Nurse development

Introduction

The role of nurses at the primary, secondary and tertiary clinical care of patients is central for effective and efficient healthcare delivery in all populations considering that nurses are particularly involved in face-to-face individualized patient counseling and promotion of self-management for patients with chronic diseases [1]. Thus, efforts at promoting self-management education for patients with chronic diseases especially in the developing countries could only be effective if nurses at all levels of the healthcare system show interest in life-long continuing professional higher education accessed through different educational methods [2,3]. While a recent US study demonstrated that being black, non-nursing work experience, holding more than one job, working the day shift, working voluntary overtime and lower intent to stay at current employer are some of the identified predictors for nurses in achieving higher graduate education [2], other potential barriers might be in operation in other populations especially in developing countries. For example, a survey on registered nurses' views on continuing formal education in Western Cape Province in South Africa identified lack of funding, lack of staff development planning, job security and family responsibilities as the perceived barriers that prevent the nurses from undertaking continuing formal education programs [4]. These limitations notwithstanding, nurse professionals agreed that formal continuing education is beneficial for personal and professional growth as is important for the enhancement of the quality of patient care [4]. For instance, the results of a recent study in Saudi Arabia, which advocated for continuing nursing education program for primary health care nurses, showed that there was no relationship between the nurses' theoretical knowledge of breast cancer

and their practice experience [5]. The Saudi Arabia experience is a likely reflection of disease knowledge and actual practice experience amongst nursing professionals in many developing countries. Even at that, there is an increased call for intensification of disease self-management education for patients with chronic diseases in the developing countries [6]. Of interest then is a recent paper in which the authors advocated for "innovative nursing education" that will assist in improving the quality of patient care [7]. In Japan, recent studies have demonstrated the efficacy of educational self-management program in preventing patients with chronic heart failure from further deterioration [8,9]. Furthermore, several research reports have shown that non-pharmacological educational intervention in patients with type 2 diabetes could be effective in preventing diabetes complications if the intervention tools are sustained and optimized [10-14]. Thus, is important that all healthcare systems establish a policy for continuing nursing education that will take up the challenges of self-management education for patients with chronic diseases [6]. Thus, with the benefits

***Corresponding author:** Philip Onuoha, School of Advanced Nursing Education, Faculty of Medical Sciences, The University of the West Indies, St Augustine Campus, Trinidad and Tobago, Jamaica, Tel: +1-868-663-6668; Fax: +1-868-663-3797; E-mail: Philip.onuoha@sta.uwi.edu, ponuoha98@yahoo.com

Received July 29, 2013; **Accepted** September 19, 2013; **Published** September 23, 2013

Citation: Onuoha P, Israel-Richardson D, Ezenwaka C (2013) A Survey of the Participation of Nurses in Continuing Professional Education in Trinidad and Tobago: A Case for Chronic Disease Self-Management Education for Patients. J Diabetes Metab 4: 295. doi:[10.4172/2155-6156.1000295](https://doi.org/10.4172/2155-6156.1000295)

Copyright: © 2013 Onuoha P, et al. This is an open-access article distributed under the terms of the Creative Commons Attribution License, which permits unrestricted use, distribution, and reproduction in any medium, provided the original author and source are credited.

of using non-pharmacological educational intervention to improve patients' care [8-14], the present study sought to assess the level of nurses' participation in continuing medical education (CME) in Trinidad and Tobago.

Methods

Subjects

All the qualified nurses employed in the service of the five Regional Health Authorities in Trinidad and Tobago were targeted for the study. The study was conducted between November 2011 and April 2012 and at the end of the study, 1,032 nurses participated in the survey; representing about 70.1% of the estimated 1,473 nurses employed in the five regional health authorities during the time of the study.

Study protocol

The research questionnaire consists of two sections: (i) Bio-data and human resource with six closed-ended item questions and (ii) continuing nursing/medical education with eight closed-ended questions. The questionnaire was pre-tested on a cohort of student nurses who were studying for upgrade course to bachelor's degrees. Since the nurses were educated and capable of understanding the health-related questions, the questionnaires were self-administered. To preserve the anonymity of the participants, the questionnaires did not contain any personal identifiers except that the questionnaires were serially numbered to avoid receiving more than one completed questionnaires from a participant. Thus, during the study, the research questionnaires with the explanatory letters and consent forms were distributed to all public hospitals and health centres within the five regional health authorities. The head nurse in each facility (ward or clinic) was requested to assist the Research Assistant in co-ordinating the distribution of the questionnaires and the explanatory letters/consent forms to all nurses within the station. Thus after reading our letter of explanation of the aim and purpose of the study, nurses that consented to participate in the study completed the questionnaires and returned them (in sealed envelopes) to the nursing station in their places of work. The Research Assistant subsequently collected the completed research questionnaires from the head nurse at the nurse station. The Ethics Committee, Faculty of Medical Sciences, University of the West Indies, St. Augustine, Trinidad and Tobago reviewed and approved the study protocol, before it commenced.

Statistics

The Statistical Package for the Social Sciences (SPSS) was used for the statistical analysis. All qualitative data were analyzed using chi-squared (χ^2) test for non-parametric parameters. The data were presented as absolute number and percentages (in parenthesis). A p-value less than 0.05 were considered statistically significant under 2-tailed testing.

Results

Table 1 shows the site and ethnic distribution of the nurse participants. A total of 1032 nurses working in the five Regional Health Authorities in Trinidad and Tobago participated in the study with a total male-to-female ratio of 1:16 (60/972). The majority (52%) of the participants were people of African descent while about 24% were of mixed ethnicity and foreigners working in the country (Table 1). The nurses' awareness of continuing medical education (CME) and participation in the same are shown on Table 2. About 55.4% of the nurses that responded to the question have not heard or not sure they have heard of CME. Of the 44.4% that knew about CME, only 25.9% have had the privilege of attending some CME activities ($p < 0.05$, Table 2). Again, of the 25.9% of the nurses that have attended some CME activities, most (91%) were within the country while only 5.7% had attended CME activity outside the Caribbean ($p < 0.05$, Table 2). Interestingly, more than 86.9% of the nurses that responded to the question would like to participate in CME activities on diabetes out of which 63.8% would like to be identified as specialist diabetes health educators if given the opportunity (Table 2). Further analysis showed that, generally, there was no significant gender-or ethnicity-related differences in the trend of the responses to all the questions (Tables 2 and 3).

Discussion

This study assessed the participation of nurses in the five Regional Health Authorities in Trinidad and Tobago in CME activities. The analysis of our data showed that, irrespective of gender or ethnicity, (a) the majority (55.4%) of the respondents were ignorant of CME and consequently only about 26% of them have attended some form of CME activities, (b) the majority of the nurses that have attended some form of CME did so within the country as only 5.7% have travelled outside the Caribbean for CME activities, and (c) more than 86.9% of the nurses would like to participate in CME activity on diabetes out of which 63.8% would like to be identified as Specialist Diabetes Nurse Educator. The above findings in a high-income developing country are further discussed in relation to developing nursing profession, enhancement of the quality of patient care and the need for chronic disease self-management education in the developing countries.

The finding that the majority of the nurses were ignorant of CME and consequently only about 25.9% of them have attended some form of CME activities is not completely unexpected in this population considering that advanced nursing education for registered nurses recently started at the University of the West Indies, Trinidad and Tobago Campus. Even then, the majority of nurses employed in the service of the Regional Health Authorities in the country are still stereotyped to non-academic, non-research approach to bedside clinical care for patients. Thus, it should be noted that continuing professional

Parameters	Sites of study – Regional Health Authorities					
	North- central	North- west	South-west	Eastern	Tobago	Total
Number	324	162	341	118	87	1032
Gender distribution						
• Male nurses	33	7	14	5	1	60
• Female nurses	291	155	327	113	86	972
Ethnic distribution (n=1017*):						
• African descent (%)	156	91	152	52	75	526
• East Indian descent (%)	75	25	118	28	4	250
• Others (%)	88	44	67	36	6	241

*total missing value is 15 (1.5%)

Table 1: Study site and ethnic distribution of the Nurses interviewed.

Questions	Response options	Gender-related Responses			
		Male, N=60	Female, N=972	Total, N=1032	missing number
<i>Have you heard of continuing medical education?</i>	• Yes (%)	31 (52.5)	416 (43.9)	447 (44.4)	26 (2.5)
	• No (%)	27 (45.8)	465 (49.1)	492 (48.9)	
	• Not sure (%)	1 (1.7)	66 (7.0)	67 (6.7)	
<i>Have you had the privilege of attending any continuing medical education activity?</i>	• Yes (%)	25 (43.1)	226 (24.8)	251 (25.9)	63 (6.1)
	• No (%)	33 (56.9)	664 (72.9)	697 (71.9)	
	• Don't know (%)	0 (0.0)	21 (2.3)	21 (2.2)	
<i>If yes, please indicate where this CME you attended took place?</i>	• Trinidad & Tobago (%)	21 (75.0)	234 (93.2)	255 (91.4)	753 (73.3)
	• Caribbean Region (%)	1 (3.6)	7 (2.8)	8 (2.9)	
	• Outside Caribbean (%)	6 (21.4)	10 (4.0)	16 (5.7)	
<i>If given the opportunity, would you like to participate in CME on diabetes?</i>	• Yes (%)	52 (88.1)	819 (86.9)	871 (86.9)	30 (2.9)
	• No (%)	4 (6.8)	64 (6.8)	68 (6.8)	
	• Don't know (%)	3 (5.1)	60 (6.4)	63 (6.3)	
<i>Would you like to be identified as a Specilaist Diabetes Health Educator?</i>	• Yes (%)	42 (71.2)	592 (63.4)	634 (63.8)	39 (3.8)
	• No (%)	10 (16.9)	205 (21.9)	215 (21.7)	
	• Don't know (%)	7 (11.9)	137 (14.7)	144 (14.5)	

Table 2: Gender-related assessment of awareness and participation in continuing medical education (CME).

Questions	Response options	Ethnicity-related Responses			missing number
		African N=526	Indian N=250	Others N=241	
<i>Have you heard of continuing medical education?</i>	• Yes (%)	237 (46.0)	115 (47.5)	88 (37.4)	40 (3.9)
	• No (%)	250 (48.5)	113 (46.7)	123 (52.3)	
	• Not sure (%)	28 (5.4)	14 (5.8)	24 (10.2)	
<i>Have you had the privilege of attending any continuing medical education activity?</i>	• Yes (%)	129 (26.4)	74 (30.8)	45 (19.8)	77 (7.5)
	• No (%)	350 (71.7)	161 (67.1)	176 (77.5)	
	• Don't know (%)	9 (1.8)	5 (2.1)	6 (2.6)	
<i>If yes, please indicate where this CME you attended took place?</i>	• Trinidad & Tobago (%)	133 (89.9)	77 (98.7)	43 (86.0)	756 (73.3)
	• Caribbean Region (%)	7 (4.7)	0 (0.0)	1 (2.0)	
	• Outside Caribbean (%)	8 (5.4)	1 (1.3)	6 (12.0)	
<i>If given the opportunity, would you like to participate in CME on diabetes?</i>	• Yes (%)	445 (87.1)	215 (88.1)	202 (86.3)	43 (4.2)
	• No (%)	37 (7.2)	13 (5.3)	17 (7.3)	
	• Don't know (%)	29 (5.7)	16 (6.6)	15 (6.4)	
<i>Would you like to be identified as a Specilaist Diabetes Health Educator?</i>	• Yes (%)	313 (61.7)	172 (70.8)	139 (60.7)	53 (5.1)
	• No (%)	120 (23.7)	38 (15.6)	55 (24.0)	
	• Don't know (%)	74 (14.6)	33 (13.4)	35 (15.3)	

Table 3: Ethnicity-related assessment of awareness and participation in continuing medical education (CME).

education is not a mandatory requirements for promotion, salary increase or other incentives in places of work in this population unlike the “payment for performance” system introduced in the health sector in Tanzania [15]. Interestingly, the American Institute of Medicine’s “report on the future of nursing” has called for redesign of both nursing education and practice to include among others increasing baccalaureate prepared nurses to 80% of the workforce, doubling the number of doctorally prepared faculty and removing scope of practice barriers [16,17]. The elements of the report will enable nurses to be interested in academics and research especially in the area of disease self-management. In Japan, for instance, nurse-led intervention research studies in the area of disease self-management education has resulted in prevention of patient deterioration and long term support for chronic heart disease patients [8,9]. Although World Bank classified Trinidad and Tobago as a high-income economy [18], advanced nursing education is only recently evolving in the population starting with increase in the number of Schools of Nursing that are offering

degree programs. Additionally, the University of the West Indies in Trinidad and Tobago recently introduced post-graduate degree programs for nursing and it is expected that the recent development will assist in boosting the development of nursing profession in this population.

Furthermore, our survey showed that the majority of nurses that have attended some form of CME activities did so within the country as only 5.7% have travelled outside the Caribbean for CME activities. The majority of nurses that participated in this study were registered nurses practicing with the Regional Health Authorities without any compulsory academic requirement or demand for research or evidence for continuing professional education. In many developing countries, attendance at academic conferences or meeting or aspiring for higher academic degree requires financial sponsorship which is not normally included in the employment contract of nurses in most developing countries. Perhaps, this might explain the limited number of nurses

that undertook continuing professional education in this study. Indeed, a published research report from South Africa indicated that the major structural barriers to continuing formal education among nurses include lack of funding and lack of coherent staff development planning [4]. Thus, if the nursing workforce in the developing countries is to be mobilized for higher professional education or for continuing professional education as articulated for American nurses [16,17], it might be necessary for employers of nurses to include such requirements in the employee's contracts.

The finding that 87% of the nurses would like to participate in CME activities on diabetes and 64% of them indicated interest in being diabetes nurse specialists is a very interesting result that will assist to boost diabetes self-management education initiative advocated for the developing countries [6]. Trinidad and Tobago, with a population of 1.3 million [19] and diabetes prevalence rates of between 18% and 24% for different ethnic nationalities [20] certainly needs nursing professionals with interest in chronic diseases. While self-management education for patients living with chronic diseases is an integral part of patient's management plan in developed countries, absence of educational activities is a major challenge in developing countries [21]. Type 2 diabetes patients who previously participated on self-monitoring of blood glucose training positively reported on the beneficial effects of self-empowerment on blood glucose control [22]. This previous study suggests the need of qualified diabetes nurse specialist that would be interested in continuing professional education program for self and diabetes patients. Indeed, Henrichs [23] described diabetes self-management as a union between "expert clinical care" and "expert self-care". Thus, for the patient to acquire the necessary skill to perform "expert self-care", such a patient must first undergo or participate in diabetes education and training programs provided by diabetes nurse educator. Indeed, our research group has previously demonstrated that previously trained primary care type 2 diabetes patients could self-monitor their blood glucose levels and have improved blood glycemia and reduced coronary heart disease risk profile [24].

One limitation of the study is that it was not designed to provide explanations for the nurses' low level of awareness and participation in CME activities. The explanations offered were basically drawn from African experiences [4,15]. Even then, the issue of low budgetary allocation to the healthcare sector in many developing countries has been reported. For instance, a study of the socioeconomics of diabetes in India showed that the total annual budgetary allocation for healthcare was about 14% of the estimated total direct and indirect cost of diabetes care alone [25]. Thus, the analysis and insight provided here is a likely reflection of the general uptake in nursing profession in the developing countries.

In conclusion, this study has shown that while a small percentage of nurses previously participated in CME activities, a significant majority (86.9%) indicated interest to participate in the future and even become specialist nurses. We therefore advocate that nurses' employment contracts should include incentives for continuing professional education to encourage future development of nursing profession.

Acknowledgements

This study was supported by the Publication and Research Fund from the University of the West Indies, St Augustine Campus. We thank Ms Elizabeth Martins and Dr Onochi Aghaegbuna for their assistance in reaching out to the nurses in Tobago and all the Heads of Nurse stations in each facility that assisted in the distribution and collection of the research questionnaires. We appreciate the timely approvals we received from the five Regional Health Authorities in the country for conducting this survey. Professor Chidum Ezenwaka was a recipient of Japan Society for the Promotion of Science (JSPS) Research Invitation Fellowship to Hiroshima University, Japan when the manuscript was prepared.

References

1. Carey N, Courtenay M (2007) A review of the activity and effects of nurse-led care in diabetes. *J Clin Nurs* 16: 296-304.
2. Kovner CT, Brewer C, Katigbak C, Djukic M, Fatehi F (2012) Charting the course for nurses' achievement of higher education levels. *J Prof Nurs* 28: 333-343.
3. Gormley DK, Costanzo AJ, Lewis MR, Slone B, Savage CL (2012) Assessing nurses' continuing education preferences in rural community and urban academic settings. *J Nurses Staff Dev* 28: 279-284.
4. Richards L, Potgieter E (2010) Perceptions of registered nurses in four state health institutions on continuing formal education. *Curationis* 33: 41-50.
5. Yousuf SA, Al Amoudi SM, Nicolas W, Banjar HE, Salem SM (2012) Do Saudi nurses in primary health care centres have breast cancer knowledge to promote breast cancer awareness? *Asian Pac J Cancer Prev* 13: 4459-4464.
6. Ezenwaka C, Eckel J (2011) Prevention of diabetes complications in developing countries: time to intensify self-management education. *Arch Physiol Biochem* 117: 251-253.
7. Billings L, Allen P, Armstrong M, Green A (2012) Creating and launching. Innovative nursing education programs: perils and pearls. *Nurs Educ Perspect* 33: 292-296.
8. Otsu H, Moriyama M (2012) Follow-up study for a disease management program for chronic heart failure 24 months after program commencement. *Jpn J Nurs Sci* 9: 136-148.
9. Otsu H, Moriyama M (2011) Effectiveness of an educational self-management program for outpatients with chronic heart failure. *Jpn J Nurs Sci* 8: 140-152.
10. Rawal LB, Tapp RJ, Williams ED, Chan C, Yasin S, et al. (2012) Prevention of type 2 diabetes and its complications in developing countries: a review. *Int J Behav Med* 19: 121-133.
11. Wattana C, Srisuphan W, Pothiban L, Upchurch SL (2007) Effects of a diabetes self-management program on glycemic control, coronary heart disease risk, and quality of life among Thai patients with type 2 diabetes. *Nurs Health Sci* 9: 135-141.
12. Kim HS (2007) A randomized controlled trial of a nurse short-message service by cellular phone for people with diabetes. *Int J Nurs Stud* 44: 687-692.
13. Kim HS, Song MS (2008) Technological intervention for obese patients with type 2 diabetes. *Appl Nurs Res* 21: 84-89.
14. Sun J, Wang Y, Chen X, Chen Y, Feng Y, et al. (2008) An integrated intervention program to control diabetes in overweight Chinese women and men with type 2 diabetes. *Asia Pac J Clin Nutr* 17: 514-524.
15. Songstad NG, Lindkvist I, Moland KM, Chimhutu V, Blystad A (2012) Assessing performance enhancing tools: experiences with the open performance review and appraisal system (OPRAS) and expectations towards payment for performance (P4P) in the public health sector in Tanzania. *Global Health* 8: 33.
16. Institute of Medicine (2011) *The Future of Nursing—Leading Change, Advancing Health*. Washington, DC, USA: National Academies of Health.
17. Beal JA (2012) Academic-service partnerships in nursing: an integrative review. *Nurs Res Pract* 2012: 501564.
18. The World Bank (2012) *Countries and Economies*.
19. Central Statistical Office of Trinidad and Tobago (2010) *Ministry of Planning & Development, Government of the Republic of Trinidad and Tobago, Population Statistics*.
20. Miller GJ, Maude GH, Beckles GL (1996) Incidence of hypertension and non-insulin dependent diabetes mellitus and associated risk factors in a rapidly developing Caribbean community: the St James survey, Trinidad. *J Epidemiol Community Health* 50: 497-504.
21. Debussche X, Balcou-Debussche M, Besancon S, Traore SA (2009) Challenges of diabetes self-management in developing countries. *Diabetes Voice* 54: 12-14.
22. Ezenwaka CE, Olukoga A, Onuoha P, Worrell R, Skinner T, et al. (2012) Perceptions of Caribbean type 2 diabetes patients on self-monitoring of blood glucose. *Arch Physiol Biochem* 118: 16-21.
23. Henrichs HR (2009) The need for knowledge of self. *Diabetes Voice* 54: 3.

-
24. Ezenwaka CE, Dingba A, Okali F, Skinner T, Extavour R, et al. (2011) Self-monitoring of blood glucose improved glycemic control and the 10-year coronary heart disease risk profile of female type 2 diabetes patients in Trinidad and Tobago. Niger J Clin Pract 14: 1-5.
25. Thakar S, Devarajan A, Kumpatla S, Viswanathan V (2010) The socioeconomics of diabetes from a developing country: a population based cost of illness study. Diabetes Res Clin Pract 89: 334-340.