

SPECIAL ARTICLE

STATE OF DIETETICS PRACTICE IN GHANA

R. N. O. ARYEETAY¹, L. BOATENG² and D. SACKEY²¹Department of Population, Family and Reproductive Health, University of Ghana, Legon, Accra,,²Department of Dietetics, University of Ghana, Korle-Bu, Accra. P.O. Box KB 52, Korle-Bu, Accra, GhanaDOI: <http://dx.doi.org/10.4314/gmj.v48i4.9>*Corresponding Author:* Dr. Richmond Nii Okai Aryeetey*Email:* raryeetey@ug.edu.gh*Conflict of Interest:* None declared

SUMMARY

Objective: Prevalence of obesity and related diseases has increased in Ghana. Dietitians have essential skills to prevent and manage dietary diseases. However, little is known about dietetic practice in Ghana. This paper describes the history and current state of dietetics practice in Ghana.

Methods: A questionnaire was administered to 13 dietitians and six dietetic interns in February 2012. The questionnaire collected data on perceptions about dietetics practice, career progression, and challenges in dietetics practice in Ghana. Key informant interviews (KII) on history of dietetics in Ghana were also held with four retired dietitians, and two dietetics educators. Additional KII were conducted with the Chief dietitian, two officers of the Ghana Dietetic Association, and three other dietitians. Most KII were conducted face-to-face but a few were only possible via telephone. Some of the KII were audio-recorded, in addition to handwritten notes. Following transcription of audio-recorded interviews, all data were subjected to content analysis.

Results: Dietetic practice in Ghana has evolved from low-skilled cadre (catering officers) offering hospital-based meal services to the current era of available trained dietitians providing diet therapy in diverse settings. However, 80% of the 35 dietitians identified are working in Accra. In three regions of Ghana, there are no dietitians. There remain limited opportunities for continuous learning and professional career advancement. Additionally, there are many unqualified dietitians in practice.

Conclusion: A huge unmet need for dietitians exists in all regions of Ghana, except Greater Accra. Bridging this gap is essential to increase access to dietetic care throughout Ghana.

Keywords: dietetics, professional practice, history, situational analysis, Ghana

INTRODUCTION

The American Dietetic Association defines dietetics as integration and application of principles derived from the sciences of food, nutrition, management, communication, and biological, physiological, behavioral, and social sciences to achieve and maintain optimal human health.¹ This definition underscores the complex nature and determinants of diet-related diseases and partly explains why obesity and diet-related diseases have become leading causes of morbidity and mortality, despite better access to information and prevention services.²⁻⁴

The World Health organization (WHO) estimates that in 2008, about 60% of all deaths were due to non-communicable diseases (NCDs).^{5,6} Surprisingly, more than 80% of NCD deaths occurred in low and middle income countries; Sub-Saharan Africa (SSA) is one of three regions with the highest risk of NCD deaths between ages 30 and 70 years. WHO's surveillance on NCD risk factors suggests that SSA is being affected at a rather fast pace.⁵ It is reported that the proportion of adults with elevated blood pressure (46%) is greater in Africa than any other region. Also, almost 30% of people in SSA do not achieve sufficient physical activity. Overweight prevalence has been reported to be rising rather rapidly in SSA.⁷ Among preschool children, Africa had the highest incidence of overweight between 1990 and 2010.⁸

Developing countries such as Ghana are currently recording diet-related diseases at a rather fast pace.^{9,10} In 2008, one-third of Ghanaian women were overweight or obese.¹¹ Another survey in urban Accra reported 35% obesity plus 28% overweight among adult women.¹²

High rates of hypertension ranging between 20% and 50% has been documented.⁹ In 2002, an estimated 8% of diabetes prevalence among men in Accra suggests a rapid increase over 0.2% observed among men in Ho in the sixties.¹³

These reports highlight the need for competent dietitians to provide preventive and therapeutic dietetic services as part of a national NCD strategy.

However, little is known about dietitians, dietetics practice, and capacity of dietitians to manage dietetic challenges in Ghana. The overall goal of the current article, therefore, is to describe the evolution of the dietetics profession, from its colonial beginnings to the current state of practice and discusses the gaps in dietetic practice in Ghana as a basis for guiding future development of dietetics practice in Ghana.

METHODS

The current study was carried out in Ghana, a country on the West Coast of Africa, which shares borders with La Cote D'Ivoire, Togo and Burkina Faso. With a population of 24 million people, Ghana's largely agrarian population which used to live in rural communities is rapidly moving to live in cities. Currently, an estimated 60% of Ghanaians are living in urban communities.

Increased exposure to the global market is significantly modifying the traditional food system. As a result, supermarkets are becoming a common shopping option for household food needs. Processed food products have also become more accessible to Ghanaians living in both urban and rural settings. In the major cities of Ghana, shopping malls offering a variety of processed convenience foods are becoming common place. However, both physical and financial access to health services, including dietetics services still remain a challenge.

A cross-sectional design employing mixed methods was used in the data collection. Thirteen dietitians and 6 dietetic interns who participated in a dietetic internship preceptors' workshop in Accra in February 2012 completed a self-administered semi-structured questionnaire. The questionnaire which was adapted from previous studies,^{14,15} collected data on dietitians' perceptions of dietetics practice in Ghana regarding opportunities for further training, adequacy of job aids, remuneration, and opportunities for career progression.

The dietitians also answered questions on adequacy of pre-service training, and professional support from the Ghana Dietetic Association (GDA). Using an interview guide, Key Informant Interviews (KII) were conducted

with four retired dietitians who provided a historical account of dietetics practice in Ghana spanning the pre-independence era until 2013.

In addition, an in-depth interview was conducted with two officers of the GDA to understand the support that the GDA offers dietitians in Ghana, the difficulties and challenges of practicing dietetics in Ghana, career progression for dietetic professionals, and level of remuneration for dietitians, in relation to other allied health professions. An in-depth interview with the Head of the Dietetics Department of the University of Ghana discussed training of dietitians in Ghana, the challenges involved with the training, and opportunities for enriching dietetics practice in Ghana.

Another interview with the resident dietitian at the Ridge hospital also discussed dietetics practice in the Ghana Health Service with focus on practice standards and challenges. Additional information regarding new dietetic programs, number of practicing dietitians, dietetics training needs, capacity, and practice standards, and placement of dietitians were obtained from other informants, including the chief dietitian of the Ghana Health Service, via phone calls and electronic mail.

KII respondents were purposively selected based on their perceived knowledge of the issues discussed in the interview. The dietitians who provided the historical account of dietetics practice from colonial times were selected because some of them practiced during the time of the events described and therefore had capacity to describe the vivid experiences of the times described. Hand-written notes were taken during all the KII. In some of the KII, audio recording was carried out with the permission of the respondent.

Ethical approval for the study was obtained from the Institutional Review Board of the Noguchi Memorial institute for Medical Research. All respondents participated voluntarily in the study, after endorsing an informed consent document explaining the procedures of the study.

Information obtained from the survey and the KII were triangulated and integrated to describe the history of dietetics practice in Ghana. The small sample size of dietitians and interns in the survey precluded statistical analysis. Thus dietitians and interns perceptions stated in the survey were summarized using an inductive content analysis process which allowed categorization of themes reported in order to answer the key research question: what is the state of dietetics practice in Ghana, historically and currently? Similar inductive content

analysis was also used to identify the key themes in the KII data.

RESULTS

History of dietetics

From the perspective of retired dietitians, three key periods in the evolution of the dietetics profession in Ghana can be identified. The first period predates the 1960s and was characterized by dietary services provided by catering officers. None of the dietitians could recollect any references to trained dietitians practicing in any hospital in Ghana during this period. The catering officers were trained locally in institutional management. According to one retired dietitian:

'During early part of my career, there were no dietitians in many places in Ghana. However, because institutional management training was available in Ghana, the catering officers were in greater numbers and were in many hospitals and may have played the role of a dietitian where there was none.' - (Retired Dietitian #1)

The second period of the history of dietetics in Ghana begins in the early sixties when foreign-trained Ghanaian dietitians were recruited to work in the hospitals. This changing tide resulted in serious role conflict between these two groups of professionals about who had superior decision-making authority over patients' diets and supervision of meal preparation.

'Wherever a dietitian was posted, the catering officer jostled for recognition and supremacy. You always had to quarrel with the catering officer and you had to find a way to work with them. The locally trained catering officers were more difficult to work with than those trained in the United Kingdom.' - (Retired Dietitian #1)

Because there were only a few dietitians at this time, only hospitals in major cities (i.e. Accra and Kumasi) had dietitians. This was partly because all dietitians were either trained in the United Kingdom or the United States of America and there were only a few in practice. During this period, many of those who were sponsored by government to study dietetics abroad refused to return home to practice in Ghana. Thus, the unmet need for dietitians kept growing.

Therefore, beginning from 1998, a 6-month intensive training program in dietetics was initiated at Korle-bu. This skill-based program which became known as the "stop-gap program" admitted bachelor graduates from nutrition and home sciences. The new program marked the beginning of the third major period in the history of

dietetics practice in Ghana and trained two cohorts of dietitians, who went on to fill key dietitian positions in the Ministry of Health.

Contemporary dietetics practice

In 2013, our nation-wide enquiry identified 35 qualified dietitians practicing in various public and private institutions in Ghana, as shown in table 1. The GHS employs nine dietitians who work in five hospitals. In addition, the four regional hospitals of the Ministries of Health and of Defence also employ 16 dietitians. Three dietitians working in private hospitals were also identified.

Table 1 Number of dietitians and the Institutions in which they are employed in Ghana

Category of institution	Location	Ownership	Institutions	Number
Regional/Sub-regional Public Hospitals ^y	Greater Accra Region	Public	Ridge Regional Hospital, Tema General Hospital, Princess Marie Louise Children's Hospital	5
	Brong Ahafo	Public	Sunyani Teaching Hospital	1
	Volta	Public	Volta Regional Hospital	1
	Central	Public	Cape Coast Regional Hospital	1
	Eastern	Public	Koforidua Regional Hospital	1
Public Teaching Hospitals	Greater Accra	Public	Korle-Bu Teaching Hospital	7
	Ashanti	Public	Komfo Anokye Teaching Hospital	2
	Northern	Public	Tamale Teaching Hospital	1
Quasi-Public Hospitals ^z	Greater Accra	Public	37 Military Hospital	6
	Greater Accra	Public	Police Hospital	1
	Greater Accra	Public	Trust Hospital	1
Private practice ^Σ	Greater Accra	private	Freelance practitioners	3
Academia ^ε	Greater Accra	Public	University of Ghana School of Allied Health Sciences	5
Total				35

^y Includes National chief dietitian (administrative position)
^z Includes the Police Hospital, and the 37 Military Hospital
^Σ All but those working in private practice are employed by public institutions
^ε Combine Training and research with clinical care

Twenty-eight (80%) of the dietitians are practicing in the Accra metropolis with the remainder working in only four other regions. Thus there are three regions without the services of qualified dietitians. As a result, there is only one dietitian for every 685,000 Ghanaians despite having more qualified dietitians (table 2).

In the survey of dietitians and interns, inadequate access to in-service training and job aids, poor remuneration and rewards system, and absence of appropriate legal and regulatory framework to guide dietetic practice were identified as key challenges. Additionally, although the public sector has promotion guidelines, many dietitians have stayed at entry level positions for many years.

Also, dietitians lacked the necessary capacity that will empower them to participate in policy formulation. Because of the rather high patient-dietitian ratios, dietitians often manage very busy clinics without appropriate remuneration and also leaving no time for continuous training. A major challenge of dietitians was poor access to resources for continuous education. Finally, dietitians expressed frustration about the unregulated manner in which unqualified persons act as dietitians and thereby mislead unsuspecting people to use diet therapies which are neither approved nor evidence-based. In both the public and private health care system, there is limited capacity to monitor and regulate standards and ethics of dietetic practice. As a result, there are many reports in the media of blatant abuse of the profession as persons with no dietetics training masquerade as dietitians.

Dietetics training

Following the stop-gap program described above, the School of Allied Health Sciences (SAHS) of the University of Ghana commenced a graduate dietetic program in 2004 and subsequently an undergraduate program in 2009. In 2012, two additional dietetics programs commenced at the University of Health and Allied Sciences, and the Kwame Nkrumah University of Science and Technology. At the end of July 2013, these programs have successfully 38 trainees at the graduate level and 18 at the undergraduate level (Table 2).

Table 2 Admission and graduation information of dietetics degree programs in Ghana (2004-2013)

Institution and year	Graduate dietetics program (2004 – 2013)		Undergraduate dietetics program (2009 – 2013)	
	# Admitted	# Graduated	# Admitted	# Graduated
University of Ghana School of Allied Health Sciences	78	38	89	18
Kwame Nkrumah University of Science and Technology	15	-	-	-
University of Health and Allied Sciences	-	-	18	-

While pre-service training in dietetics has expanded, in-service capacity building remains weak. Currently, there is no structured in-service training program in

dietetics in Ghana. Individual practitioners therefore find their own means of developing their skills and keeping abreast of emerging evidence in dietetic practice. Since 2008, a monthly magazine on healthy diets and lifestyles has been published by a dietitian in Ghana and serves as a learning resource for dietitians in Ghana.

Support for Professional practice

In 2009, the Ghana Dietetic Association (GDA) was registered to *represent and develop the dietetic profession to contribute towards achieving optimal nutrition of all Ghanaians and provide most credible source of nutrition and food knowledge applied to health and disease in Ghana*.¹⁶

The association seeks to achieve this goal through its general meetings, and seminars which builds the capacity of members and also increases visibility of dietetics in Ghana. In 2010, the GDA also developed a code of ethics to guide professional practice and conduct of dietitians in Ghana. In 2012, the association organized a continuing professional development course for its members and plans to institutionalize this activity.

Also in 2012, the Ghana government passed the national public health law which requires all allied health professionals, including dietitians to register with a newly formed Allied Health Task Force. To become registered, dietitians require endorsement from the GDA, failing which they risk recognition by the Task Force. Also, there is ongoing certification examinations for practitioners which will lead to certification for dietitians.

Future perspectives

The survey of dietitians in Ghana revealed that most dietitians anticipate the major dietetic-related challenges will include obesity, diabetes, and cardiovascular diseases. The practice of dietetics will continue to be focused on diet therapy. In addition, interventions in public health, and dietetic research were identified as key areas of interest. In view of these expectations, it is anticipated that dietetic specializations in obesity, diabetes and cardiovascular diseases are urgently needed.

DISCUSSION

The main finding of the current study is that dietetics practice in Ghana is in a continuous state of evolution towards excellence. Looking back from the early sixties, dietetics practice in Ghana has emerged from an era where services were mainly provided by catering officers with limited dietetic competency, to the current situation where the number of trained and qualified dietitians has increased to the point where, potentially,

every public hospital can potentially fill the existing vacant dietitian positions.

The increasing numbers of Universities offering dietetics programs demonstrate the increasing demand for dietetics training not only for Ghanaians but also for applicants from elsewhere in the Sub-Saharan Africa region.

In a broader context, these findings help to fill the gap in knowledge concerning dietetic practice in Ghana. It can also serve as a model for describing the state of the profession in other African countries. This will be important because currently, little is known about the dietetics practice situation in the Africa Region. In 2001, Calabro and colleagues' international survey of dietetics practice received responses from only nine African Countries.¹⁷

Despite the positive developments observed in Ghana, there still remains a situation where many dietitian positions in the public sector remain unfilled. This is partly because the Government of Ghana has not provided the necessary financial commitments to hire the trained dietitians. Even more critical is the inequitable distribution of dietitians across administrative regions in Ghana. Essentially, more than 90% of dietitians practice in Accra, limiting dietetics service delivery to those living in or close to Accra.

Strong leadership as was demonstrated in the era when the number of dietitians was fast dwindling is also needed currently by the Ghana Health Service, to ensure the expansion of dietetics service access in all regions of Ghana. This is critical as overweight and obesity prevalence rises sharply in tandem with the risk of non-communicable diseases.^{9,12,18}

Another important issue that demands attention is the increasing abuse of the dietetics profession by charlatans posing as dietitians and diet counselors. The Ghana Health Service, in partnership with the Ghana Dietetic Association as well as the newly created Allied Health Task Force needs to design and enforce regulatory mechanisms for ensuring appropriate professional conduct and practice. The development of a code of ethics by the Dietetic Association is a good first step, in addition to registration of dietitians by the Allied Health Task Force.

Adequate public awareness will be necessary to ensure that both the public and practitioners are knowledgeable about how to determine who is a qualified practitioner or otherwise. In the study by Calabro et al, most of the African countries south of the Sahara (exception South Africa and Botswana) either did not have a code

of ethics or did not know about its existence.¹⁷ Also, many (40%) did not have requirement for practice credentials. Addressing the issues about credibility will help address some of the challenges dietitians encounter relating to poor perception of their status as professionals, and suboptimal remuneration.

CONCLUSION AND RECOMMENDATIONS

Dietetic practice in Ghana has evolved from an era of low technical competence to a current state of having more professionally qualified dietitians. However, these professionally qualified dietitians reside mainly in Accra. Bold steps are needed to hire more dietitians into all regional hospitals as a first step to expanding dietetics care in Ghana. While that is being done, there is also the need to address practice and professional challenges of the profession and for dietitians.

ACKNOWLEDGEMENT

We wish to acknowledge the help and information provided by all the practicing and retired dietitians towards the preparation of this article. We are also grateful to the faculty at the listed universities for providing enrolment and graduation information: University of Ghana, Kwame Nkrumah University of Science and Technology and the University of Health and Allied Sciences.

REFERENCES

1. O'Sullivan Maillet J, Skates J, Pritchett E. American Dietetic Association: scope of dietetics practice framework. *J Am Diet Assoc.* Apr 2005;105(4):634-640.
2. Lenz M, Richter T, Muhlhauser I. The morbidity and mortality associated with overweight and obesity in adulthood: a systematic review. *Dtsch Arztebl Int.* Oct 2009;106(40):641-648.
3. Guh DP, Zhang W, Bansback N, Amarsi Z, Birmingham CL, Anis AH. The incidence of comorbidities related to obesity and overweight: a systematic review and meta-analysis. *BMC Public Health.* 2009;9:88.
4. Popkin BM. Contemporary nutritional transition: determinants of diet and its impact on body composition. *Proc Nutr Soc.* Feb 2011;70(1):82-91.
5. World Health Organization. *Global Status Report on Non-communicable Diseases 2010.* Geneva: World Health Organization; 2010.
6. World Health Organization. *World Health Statistics 2012.* Geneva: World Health organization; 2012.

7. Ziraba A, Fotso J, Ochako R. Overweight and obesity in urban Africa: A problem of the rich or the poor? *BMC Public Health*. 2009;9.
8. de Onis M, Blossner M, Borghi E. Global prevalence and trends of overweight and obesity among preschool children. *Am J Clin Nutr*. 2010;92:1257–1264.
9. Bosu WK. Epidemic of hypertension in Ghana: a systematic review. *BMC Public Health*. 2010;10:418.
10. de-Graft Aikins A, Addo J, Ofei F, Bosu W, Agyemang C. Ghana's burden of chronic non-communicable diseases: future directions in research, practice and policy. *Ghana Med J*. Jun 2012;46(2 Suppl):1-3.
11. Ghana Statistical Service G, Ghana Health Services G, ICF Macro. *Ghana Demographic and Health Survey 2008*. Accra: GSS, GHS, ICF Macro;2009.
12. Hill AG, Darko R, Seffah J, Adanu RM, Anarfi JK, Duda RB. Health of urban Ghanaian women as identified by the Women's Health Study of Accra. *Int J Gynaecol Obstet*. Nov 2007;99(2):150-156.
13. Abubakari AR, Bhopal RS. Systematic review on the prevalence of diabetes, overweight/obesity and physical inactivity in Ghanaians and Nigerians. *Public Health*. Feb 2008;122(2):173-182.
14. Buchholz D, Hofmann J, Babitsch B. The Profession and Work Fields of Dietitians in Germany 2010.
15. http://www.vdd.de/fileadmin/downloads/VDD_Downloads_neu/PosterCharite300_Dietitian_13_9_2_.pdf.
16. Hwalla N, Koleilat M. Dietetic practice: the past, present and future. *Eastern Mediterranean Health J*. 2004;10(6):716-730.
17. Ghana Dietetic Association. *Constitution of the Ghana Dietetic Association*. Accra Ghana Dietetic Association; 2009.
18. Calabro KS, Bright KA, Bahl S. International perspectives: the profession of dietetics. *Nutrition*. Jul-Aug 2001;17(7-8):594-599.
19. Darko R, Adanu RM, Duda RB, Douptcheva N, Hill AG. The health of adult women in Accra, Ghana: Self-reporting and objective assessments 2008-2009. *Ghana Med J*. Jun 2012;46(2):50-57. ☛