



# FIRST CYCLE PROFESSIONAL HIGHER EDUCATION DEGREE IN DIETETICS: A COMPARISON OF SAUDI PROGRAMME WITH THE EUROPEAN STANDARDS

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## **ABSTRACT**

**Purpose:** To compare the King Abdulaziz University (KAU) first cycle Clinical Nutrition (CLN) study programme with the European standards.

**Design/methods:** The current study plan for KAU CLN programme was compared with European programmes. Comparison carried out using the 2005 European Federation of the Associations of Dietitians (EFAD) Benchmark statement.

**Findings:** In comparison to European countries, the KAU CLN programme qualify for BSc in CLN and delivered in English language. It required for European countries to deliver dietetic programmes under the faculties for health programmes, which also applied for KAU CLN programme where it is in the curricula of Faculty of Applied Medical Sciences. CLN students has to complete 120 weeks (theoretical) and to practice (fieldwork) for 30 weeks (60 day = 480 hr/academic year while doing the programme. This is comparable with the European countries. Correspondingly to the European countries, CLN senior students are required to submit a final report for their graduation research projects and to conduct a one-year internship programme. In most European dietetics programmes, qualification is connected

with registration, which is the same for Saudi CLN graduates. The programme does not use European Credit Transfer System (ECTS) and use a GPA Credit System and a total of 137 Credit hours  $\approx$  342.5 ECTS should be completed in order to be accredit for the qualification.

**Practical implications:** For Saudi CLN students to internationally approve the practise of their qualifications, competences and skills, particularly throughout the European Higher Education Area.

**Originality/value:** The first Saudi study to compare a national dietetic programme with European countries based of EFAD EDBS.

**Keywords:** European Federation of the Associations of Dietitians; EFAD; King Abdulaziz University; KAU; European; Saudi; Clinical Nutrition; CLN; dietetics; higher education; competencies; 1st cycle degree.

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## INTRODUCTION: BACKGROUND AND AIMS

In current years, the significance of healthy nutrition for the population health as well as the economic aspect of producing healthy and nutrient rich food accessible to all has been globally emphasised.

Nutrition is not only important for food supply and food accessibility. Nutrition is important to ensure that people receive and have access to an adequate nutrient intake and to realise human potential. The role of the dietitian is a many-sided professional placed at the boundary of copious sectors of activity. This includes nutrition, food science, management, food technology, food promotion and communication. The profession of dietetics is categorised among the paramedical professions.

As a result, various nutrition and dietetics education programmes started being implemented in higher education institutions all over the world including Europe and the Middle East.

Most European countries are moving towards becoming integrated into the economic and educational structures of Europe. The education of a dietitian in Europe is mainly unified and organised by European Federation of Associations of Dietitians (EFAD) (EFAD/the Voice of European Dietitians, 2015a). The EFAD was established in 1978 and includes 34 National Dietetic Association members. EFAD's currently registered members counting a total of more than 35,000 dietitians,

which are included in 27 European countries (EFAD/history, 2015b).

Many Saudi Academic programmes, particularly in the health field have experienced internal and external comparison (Benchmarking) with other programmes. Benchmarking is an organisation attitude for employing best practices at best cost. It is important process for improving performance of a company, public organisation, programme or a university. The process needs to continuously identify, understand, and adapt outstanding practices and processes inside and outside an organisation (Kelessidis, 2000). The attitude is a current concept in the healthcare system (Ettorchi-Tardy et al., 2012).

European Dietetic Benchmark Statement (EDBS) as defined by EFAD

"an initiative undertaken under the aegis of the Quality Assurance Agency (QAA) to describe the nature and characteristics of higher education programmes in a specific subject, while representing general expectations about the standards for an award of qualifications at a particular level and articulating the attributes and capabilities that those possessing such qualifications should be able to demonstrate" (EFAD, 2010)."

The statement was recommended by EFAD to be used by national organisations those providing education concerning curriculum planning or/ and development. The benchmark could be used to internally and externally declare quality and standards.

European Academic and Practitioner Standards for Dietetics was issued in 2005 (EFAD, 2005). Benchmark accomplished an agreement vision crossways Europe concerning the share of a programme, leading to qualification as a dietitian in the country state that needed to be used up in employment in order to accomplish a skilled specialist. Higher Education Institutes that teach dietetics in Europe requires a period of 30 European Credit Transfer System (ECTS) credit points<sup>1</sup> (European Commission, 2009) or semi-academic year of study at least for a practice period (EFAD, 2005) Moreover (EFAD, 2009), circulated European Dietetic Competences and their performance indicators that define the level of competence to be completed before being qualified as a dietitian. Taken together the EFAD (2005, 2009) documents provided a clear plan for the education of a dietitian in Europe.

Saudi Ministry of Education (MOE) are providing specific guidelines for the required content of programmes in dietetics such as including programmes under faculties for health programmes. In the same time, the MOE allows adequate flexibility for higher education institutions to develop the structure of their individual programmes. Dietetics is included in the curricula of Faculties of Applied Medical Sciences (FAMS) in different Saudi Universities. This include King Saud University, Umm Al-Qura University, Taibah University, Jazan University University of Ha'il, Dammam, Najran University, Al-Baha University, Qassim University (SAU). The programme in King Abdulaziz University (KAU) is the 2nd established dietetic programme (SAU, 2015).

Holders of bachelor's degrees in (clinical/therapeutic) nutrition from health faculties are classified as (clinical/therapeutic) nutrition specialists after a one-year internship (Saudi Commission for Health Specialties, 2009, 2011).

The KAU in Saudi Arabia started developing its academic curriculum in the field of Clinical Nutrition (CLN) programme in 2004. The University introduced the Bachelor's Degree programme which currently enrolls more than 114 undergraduate students. The Programme for

Dietitians is one of the four programmes that are offered by the FAMS. Other FAMS programmes are Medical Laboratory Technology, Physical Therapy and Diagnostic Radiology. The KAU CLN programme is offered in one branch in Jeddah city (King Abdulaziz University, 2014). The first batch of female students admitted to the BSc programme of CLN was in 2005.

Education and nutrition are important and essential conditions and resources for improving public health. The KAU CLN programme was introduced to enhance the nutritional well-being and health of individuals in the community. The current mission of the department is "Community responsibility: Knowledge development, Research, Innovation and Entrepreneurship in Nutrition & Dietetics" (King Abdulaziz University/ Clinical Nutrition Department, 2014a). Looking at the relevance of the programme to the mission and goals of the Awarding Institution, the KAU/ FAMS lists its goals as developing programmes that produce highly qualified health professionals graduates (King Abdulaziz University, 2014a). This is in consistent with the mission and goals of CLN programme (King Abdulaziz University/Vision, Mission, Goals and Objectives, 2015e).

The crucial purpose of this comparison study is to measure the KAU first cycle CLN study programme and qualification standards and compare it with the European standards based on the 2005 EFAD approach.

The survey could help provide graduates of King Abdulaziz University CLN Programme, King Abdulaziz University and Ministry of Higher Education with guidance on the curriculum content and delivery of dietetic programmes at international level. This could facilitate its use to decision makers in planning and developing programmes and for (re)validation of the existing programmes. It is a call for internal benchmarking for Saudi CLN programmes and for a unified Saudi curriculum content. It also a call to decrease existing differences in delivering and standardising education programmes in the field of nutrition and dietetics, which could help in establishing a national/regional higher education structures for the nutrition and dietetic education and

<sup>1</sup>European Credit Transfer System (ECTS) points system can be found at [http://ec.europa.eu/education/tools/docs/ects-guide\\_en.pdf](http://ec.europa.eu/education/tools/docs/ects-guide_en.pdf).

programme in a convergent way. This is in order to ensure the quality and maintain sustainability of these education programmes when compared to the regional, European and other international situations.

## DESIGN/METHODS

A benchmark survey, designed and conducted to define and critic current KAU dietetic education. The study consists of conducted information from the FAMS/CLN Department website/s, the FAMS/Programme administrations.

In order to conduct this study, an ethical clearance from the Ethics and Research Committee at the Faculty of Medical Applied Sciences at King Abdul-Aziz University was obtained. Further approval attained from head of the CLN Programme.

A benchmark with European dimension for curriculum content (modules, courses, learning methods used for teaching (e.g. Lectures, group discussions, laboratory assignments/training), use of European Credit Accreditation and Transfer System (ECTS), division of hours over contact and self-study, methods of assessment of students' proficiency against the set objectives of the programme. Comparison is made based on the 2005 European Federation of the Associations of Dietitians (EFAD) benchmark survey and the used questions to compare basic education programmes.

## RESULTS

The present study measures facts on the KAU first cycle CLN study programme and compares the situation with European countries.

The KAU CLN Programme is a bachelor programme in higher education. The study programme lasts eight semesters or four years and totalling 137 credit hours. The lessons are conveyed by an academic staff with multidisciplinary vocational profiles ranging in the areas from Nutrition and Dietetics, Medicine, Food and Medical Technology and Biotechnology, to Natural and Essential Medical Sciences<sup>2</sup> (King

Abdulaziz University/Staff Members, 2015b).

The study programme belongs to the domain of the Bachelor of Applied Medical Sciences (Figure 1 shows the organisation chart of the department). The KAU CLN programme leads to a BSc, delivered in English Language and gives qualification as a clinical dietitian. The programme was established in 2005. Similar to all KAU study programmes, the CLN programme is requisite to accredit by national and international accreditation agency and recently was accredited by the Accreditation Agency in Health and Social Sciences (AHPGS). The AHPGS is a European Agency that is based in Germany and has specific criteria for providing accreditation (AHPGS, 2012). KAU CLN programme was positively recommended by the expert group of AHPGS during their on-site visit (on the 9th and 10th of November 2015) to be accredited by AHPGS (Personal contact with FAMS Dean, Vice-Dean for Development & Head of CLN programme).

EFAD compares if there is a national requirement for content of dietetics programmes and in Saudi Arabia, universities should include their dietetic education programmes under faculties for health programmes, particularly in the curricula of FAMS and the responsible body is the Saudi MOE.

Based on the EDBS, choices of approaches and techniques for teaching, learning and assessment are for educational institutions to define and should match the learning outcomes associated with health profession programmes. The teaching and learning methods of KAU CLN study programme were defined by the department<sup>3</sup> (King Abdulaziz University/Teaching Materials, 2015d) and their matching with the learning outcome was evaluated internally using different techniques such as students' feedback evaluation surveys, courses instructors' reflections on each course and the feedback reports from the departmental advisory committee members. Moreover external evaluation and feedback was made by the AHPGS.

Based on the EDBS, academic and practical elements are required for qualification as a dietitian. The KAU CLN programme integrates Dietetic Education and Practice<sup>4</sup> (King Abdulaziz

<sup>2</sup>King Abdulaziz University (2015b) Staff Members can be found at: <http://nut.kau.edu.sa/Pages-Staff-Members1.aspx>.

<sup>3</sup>Teaching Materials and Methods for the KAU CLN study programme can be found at: <http://nut.kau.edu.sa/Pages-Teaching.aspx>.

<sup>4</sup>Study Plan is available at: <http://nut.kau.edu.sa/Pages-Study.aspx>.

University/Study Plan, 2015c).

EFAD suggests students to follow a first cycle course which carries a minimum of 210 ECTS (180 ECTS points for the theoretical part and 30 ECTS points for the practical part). The total ECTS points was recommended to match programme periods for about three and half years of study. The KAU programme does not use ECTS and uses a KAU Credit System. The programme qualifies students for Bachelor or degree in CLN when they successfully complete 137 credit hours during a time frame of Four (4) years.

The first KAU CLN cycle is associated with the KAU Credit hour's system and with ECTS when calculated as follows.

A 137 Credit hours  $\approx$  342.5 ECTS. This calculated as KAU programme (137 Credit hours) = to  $137 \times 2.5 = 342.5$  ECTS. Therefore, this means that KAU programme teaches more credit hours in comparison to the EFAD accredited programmes. The duration of training fieldwork period is 30 weeks (60 days = 480 hr) and the range for European countries is (2.3–40 weeks).

In addition, student must also complete one obligatory year (Internship Programme) of supervised clinical/community practice with

the exception of one-month elective rotation. Therefore, the total length of the dietetic course is five years including the theoretical and practical/fieldwork, which is within the range for the total length of the European countries.

Clinical placements take place in hospitals, organisations and community centres. In the internship year, interns practice for 40 hr per week from Sunday through Thursday. The programme begins in August and ends in July of the following year.

Students study 45 hr per week. Methods of study comprise lectures, seminars and practical work and students are expected to do some private studies for 15 hr per week. However, when the weeks or hours are calculated, KAU deliver a dietetic education programme in 120 weeks and students practice for 60 day/year (fieldwork in the 4th year). Therefore the number of weeks for practice during the four years of study is  $60/7 = 8.5$  week, which is within the range of other European countries. The fifth year is allocated for the internship programme and placements take place in different hospitals in the city, country or even outside the country.

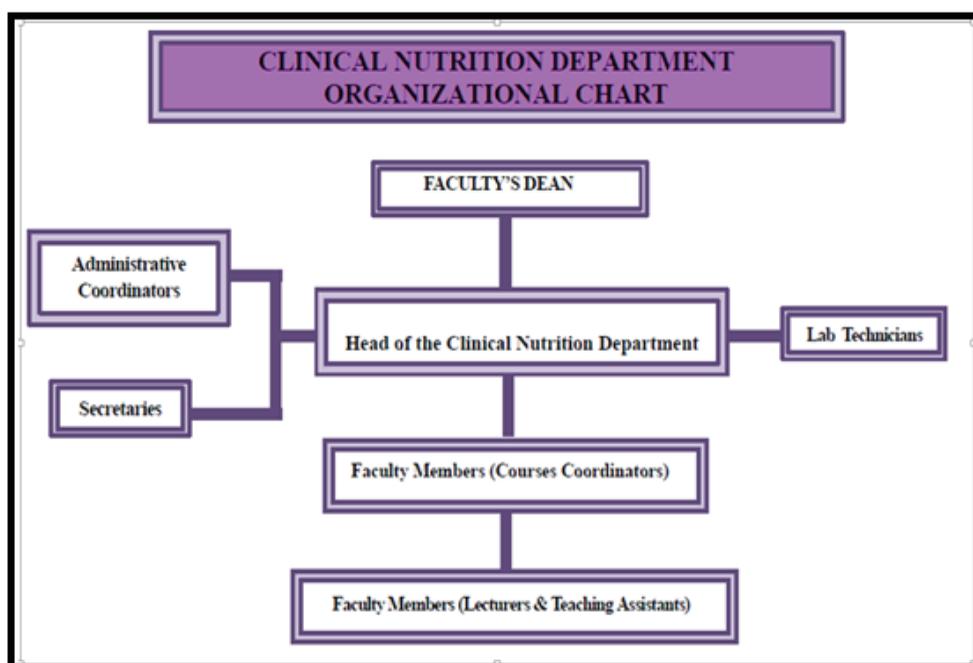


Figure 1 The organisation chart of the KAU CLN Department (2015–2016)

Regardless of the training type (fieldwork in the 4th year or during the internship placement), admission to training in most European programmes require five level subjects concerning natural sciences, mathematics, national language, English language and practical experience and KAU CLN study programme will not allow students to conduct any type of training if they did not completed these five levels before conducting training (EFAD, 2005). The division of the theoretical programme follow the European one and include Basic Sciences, Food and Nutrition Sciences, Food Services Administration, Nutrition Education and Community Nutrition (EFAD, 2005; Stephens Association, 2013). Similar to some European countries, the theoretical programme is designed as problem based learning where all the five groups are integrated.

To be qualified for a BSc in CLN, it is obligatory for senior students to submit a research project report using research methods for passing the examination. The duration of the KAU project is 30 weeks and range for European countries is (2.3–40 weeks). The 'Senior Research Project' mainly aims to prepare students to be able to plan and implement an independent nutrition research project in the area of Nutrition and Dietetics and to present and discuss its findings. The major intended learning outcomes of the project/research task is students are expected to be introduced to the research process with an emphasis on using research in health sciences. Students in groups complete one of the different areas of research including experimental, clinical studies, nutrition and dietetic services/practice and community-based. All research should relate to nutrition/dietetics field and origin or in conjunction with a larger, ongoing research study.

Graduation is connected with registration with the profession governing body in most of European programmes. This is similarly applied for graduate of KAU programme after completing their internship period. Students should immediately register with the authorising body for all health profession the Saudi Commission for Health Specialties (SCFHS). However, the national dietetic association the SDA has no influence on the national requirements of the programme.

The existing curriculum have a well-defined outcomes of the programme but does not have any defined competencies for the students as in the contemporary dietetics curriculum in Europe (EFAD, 2012).

## **DISCUSSION, CONCLUSION AND RECOMMENDATIONS**

The overall objective of the study was to compare the standards and comparability of the King KAU first cycle CLN programme with the European standards.

The study is first to compare a Saudi CLN programme with EDBS. The study can help the Saudi MOE and other Higher Education Institutions (HIE) who offers CLN programmes to recognise the students need and demand qualification which can use effectively for the purpose of their studies and careers in comparison to European standards.

The profession of dietetics is comparatively new in contrast with other health professions that are well-known in the society. Dietetics has globally been proficient for less than one century everywhere. In 1917, the profession started in the USA. Conversely, it grow into recognition in the UK in the mid-1930s, while in France it became on track in the middle of 20th century (Winterfeldt et al., 2010). In some developing countries the profession is very recent or still does not exist. In Saudi Arabia, the profession of dietetics was documented around two hospitals in Riyadh city. This was in the 18th Century and the working Dietitians were Western Dietitians (Hwalla and Koleilat, 2004). The first education programme started at King Saud University in Riyadh in 1980 and the first two Saudi Dietitians graduated from the programme in the academic year 1984–1985 (Personal communication with one of the first graduates, 18 December 2015). The KAU CLN programme was the second recognised programme in Saudi Arabia. The programme was established in the academic year 1424 H/2003 G:

"to fulfil the society needs, to limit the current shortage of the legally protected title of a dietitian and to promote the profession in the country, particularly in the Western Province; the department was established" (King Abdulaziz University/Head of Department Message, 2015a)<sup>5</sup>.

<sup>5</sup>KAU CLN Head of Department Message can be found at: <http://nut.kau.edu.sa/Pages-Head-Department-Message.aspx>.

In industrialised countries, education programmes, particularly those governed by national organizations such as the British Dietetics Association has recorded a growth of the profession (BDA, 2013). The Saudi Dietetic Association was established recently and it aims to be the main reference in CLN, locally, regionally and in the Arab world (Saudi Dietetic Association, 2015).

The Education of dietetics in Saudi Arabia remains under evaluated in the language of specialisations offered by higher education in the Kingdom of Saudi Arabia particularly, when compared with the European agencies. This could be referred to the absence of the role of Saudi Dietetic Association in regulating, assessing and maintaining the profession.

Admission to dietetic training in most European programmes require five level subjects concerning natural sciences, mathematics, national language, English language and practical experience and the KAU programme meet this European requirements. The KAU division of the theoretical programme follows the European standards and include Basic Sciences, Food and Nutrition Sciences, Food Services Administration, Nutrition Education and Community Nutrition.

Training to grow into a dietitian involves supervised or practical training under the guidance of a registered or authorised dietitian. Currently and based on the CLN department experience and reports of KAU CLN advisory committee reports, there is a lack of trained dietitians employed in Jeddah hospitals, particularly the KAU hospital, which is an obstacle to complete training for senior students (fieldwork), internship period or for newly graduate dietitians. However, to cover this problem academic staff (registered dietitians) are involved in training senior students in their fieldwork at KAU hospital.

New relationships are established through the advisory committee for the programme and a good relationship with dietetics professions in different clinical settings should open possibilities for KAU CLN practical training programme and research area where dietetic students who belong to health sciences should (Stephens et al., 2009) conduct research (Personal contact with the CLN

Head of Department).

As dietetics cannot be learned exclusively in teaching institutes, the professional practice of dietetics requires that the student of dietetics validates their skills (EFAD, 2010). This requires practical experience and clinical attachments in institutes that provide a good place for a standardised practice in different scopes (EFAD, 2010). In contrast with some other European countries where scopes of practices were defined by national dietetic organisations following EFAD recommendations, Saudi Arabia are not following any standards of practice by an organising body (Aljaaly and Khalifa, 2015). For example, lessons can be learned from the European Standards for Practice Placements in Dietetics, which were defined to maintain the future of dietetic professionals. This could be achieved by involving organising bodies such SCFHS and SDA to standardise the dietetic practice in all scopes (EFAD, 2010).

The field of dietetics is constantly evolving and competences should be kept high (European Commission, 2012) and thus it is important for dietetics students to keep updated in the ever expanding scope of dietetic practice including new data on different areas of practice (Aljaaly, 2015). The KAU dietetic students are involved in many clinical-based and community-based activities. The method of teaching used in the programme keep students searching the new in the field and attend conferences and workshops even while undertaking their dietetics course (King Abdulaziz University/Teaching Materials, 2015d).

The department is looking to highly meet the accreditation process and be the leader of the CLN departments all over the country<sup>6</sup> (King Abdulaziz University/Vision, Mission, Goals and Objectives, 2015e). It also looking to compete nationally, regionally and internationally with other departments with regards of the quality of graduates working in the field of Nutrition and Dietetics.

Accreditation is important to ensure sustainability of quality for higher education programmes (Brence and Rivža, 2011). The KAU CLN department has worked to be

<sup>6</sup>Vision, Mission, Goals and Objectives are available at: <http://nut.kau.edu.sa/Pages-mi.aspx>.

accredited nationally by [National Commission for Assessment and Academic Accreditation (NCAAA)] and the internationally by (AHPGS) accreditation. Recently, KAU dietetics programme was evaluated and accredited by the AHPGS European Agency in 2015 following the agreement between the FAMS and the AHPGS to evaluate three programmes including CLN. The assessment process included the teaching process and methods used for teaching, administrative staff, teaching staff, taught theory and practical courses including classes, laboratories and equipment, students' achievement in all courses and the will for improvement. Other assessment methods included assessment of practical training for example, the fieldwork training for senior students and internship programme. Achievements, limitations and strengths points for the programme were also been assessed for example, workforce and clinical placements for graduates.

The department is looking to highly meet the accreditation process and be the leader of the CLN departments all over the country (King Abdulaziz University/Vision, Mission, Goals and Objectives, 2015). It also looking to compete nationally, regionally and internationally with other departments with regards of the quality of graduates working in the field of Nutrition and Dietetics.

Comparable qualifications were recommended by EFAD 2005 to support the European labour market, enable dietitians to study and work more easily throughout the European Union. It is also expected that students need and demand qualifications which can be used effectively for the purpose of studies and careers all over Europe (EFAD, 2005).

The results of the present benchmark for KAU CLN Programme with EFAD ascertain that the KAU students will have no difficulties in taking further education and/or professional practice or even work in European countries. Especially since the programme is currently accredited by a European Institute.

It is expected that the study will be used as a reference document by: Saudi MOE, Saudi Legislatures of the Health and Care Professions Council the SCFHS and other Professional Constitutional Governing Bodies such as the

Saudi Dietetic Association (SDA), which are recommended to be involved in the validation, revalidation, quality assurance and review of health programmes.

It could also assist and facilitate dietetic programme providers such as teachers in academic institutions, practice educators in practice placements and employers to support and assist Dietetic students to give an overview of the expectations of the scope and depth of their learning and preparation for future practice.

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- Nutrition and Environmental Health from CIHD, ICH, UCL, London. Two Post-Doctoral programmes in UK. She was a Member of different committees in the Saudi Council for Health Specialist. She has published articles on nutritional status of adolescents and food advertising, dietetic practice and professionalism and in higher education. Been an invited speaker at many national, regional and international conferences since 1986 to present.

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## BIOGRAPHICAL NOTES

**Dr. Elham Aljaaly** is Saudi national. She is an Assistant Professor, the vice dean for female section and the Head of the Clinical Nutrition programme at Medical Applied College, King Abdulaziz University in Jeddah, Saudi Arabia. She is the Chairperson of the Commission for Academic Accreditation for the Clinical Nutrition Programme. She is also a Consultant Editor in the International Journal of Food, Nutrition and Public Health (IJFNPH) and an Editorial Member in the Arab Journal of Nutrition and Exercise (AJNE). She has been nominated by the World Association for Sustainable Development (WASD) as a track chair in different conferences related to WASD including tracks for the medical sciences and public health, food nutrition and public health and public policy and higher education. She is holding an MSc in Human Nutrition from University of Sheffield and PhD in Community