



Research Status and Profile of the Second Didactic Dietetics Programme in Saudi Arabia: A response from a Diaspora of Graduates

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Nutrition and dietetic professionals equally to other health specialists are increasingly working within the evidence-based practice pattern to support the provision of safe and quality care for their patients.

Earlier effort has branded the dearth of involvement of dietitians in research (Slawson, 2013).

The development of research abilities for many dietetics professions begins in many countries in undergraduate education, which requires effective research teaching & learning approaches.

**Slawson, D.L., Fitzgerald, N. & Morgan, K.T., 2013. Position of the Academy of Nutrition and Dietetics: The Role of Nutrition in Health Promotion and Chronic Disease Prevention. Journal of the Academy of Nutrition and Dietetics, 113(7), pp.972-79.

Background



Previous suggestions in the teaching and learning process in research concerning the field of nutrition and dietetics confirmed that hands on, real life, and self-determining research experiences are appreciated by students (Whelan et al., 2007).

The King Abdulaziz University (KAU) undergraduate degree programme in nutrition and dietetics has defined the value of research to individuals and society by incorporating research in its mission “Community responsibility, Knowledge development, Research, Innovation and Entrepreneurship in Nutrition & Dietetics”.

Research is a specific requirements for the KAU degree in dietetics

**Whelan, K. & Markless, S., 2012. Factors that Influence Research Involvement among Registered Dietitians Working as University Faculty: A Qualitative Interview Study. J Acad Nutr Diet, 112(7), pp.1021-28.

** (CLN mission/objectives/goals,2016).



Aim & Objectives

The primary programme's goal in research and research training is to "develop and sustain a well-qualified programme with high level of commitment for excellence in nutrition & dietetics education which promote research and innovation" (CLN mission/objectives/goals, 2016)..

The Saudi National Commission for Academic Accreditation & Assessment (NCAAA) claims to any Saudi institution with the title "university" to meet the standards for research.

In addition, teaching staff must have continuing involvement in scholarly activities in their field of study (NCAAA,2009). .

The purpose of this study is

✓ *to assess the research status and profile of the second Saudi nutrition and dietetics programme in Jeddah city, Saudi Arabia*

✓ *to investigate the involvement of a diaspora of graduate dietitians in research and audit.*

✓ *The study will also assess graduates' understanding and attitudes in the direction of these activities.*

Aim & Objectives



Design/Methods

- Major components and indicators in defining criteria of quantity, quality, funds, research awards, data collection and reports about faculty and students' participation in research were collected (programme-based data).
- The Online Student Satisfaction Survey was distributed to each student those took the students research projects course (n= 20 students) using ODUS PLUS electronic academic services.
- The feedback survey from the external examiners (n=2 examiners) was conducted after the seminar time (in the academic year 2014-2015) where students present their research projects.
- Feedback Survey from the KAU CLN Advisory Committee (n=8 members) was conducted in the academic year 2015-2016.

Program Evaluation Survey (PES)

Program Title/ intern clinical nutrition _____

Semester 5 Year 2015/2014

Feedback from students is very important in trying to improve the quality of programs.

This questionnaire is designed to gather opinions from final year students about their experiences at the institution throughout their program.

This is a confidential survey. Do not write your name or identify yourself. Your responses will be combined with the responses of others in a process that does not allow any individual to be identified and the overall opinions will be used to plan for improvements.

Please respond to the following questions by completely filling a response for each of your answers.

Do this Do not mark in any of these ways.

Use a pencil or blue/black pen only Do not use red, green or yellow
Make heavy marks that fill in your response Do not use highlighters

- Strongly agree means the statement is true all or almost all of the time and/or very well done.
- Agree means the statement is true most of the time and/or fairly well done.
- True sometimes means something is done about half the time.
- Disagree means something is done poorly or not often done.
- Strongly disagree means something is done very badly or never or very rarely done.

Strongly Agree
Agree
True Sometimes
Disagree
Strongly Disagree

Help and Support for my Learning

1. Adequate academic and career counselling was available for me throughout the program.
2. The instructors were available for consultation and advice when I needed to speak with them.

Design/Methods

Feedback Survey (After the 1st & 2nd meeting)

KAU's Clinical Nutrition Program (CNP) Advisory Committee Survey For the academic year 2015-2016

1. As a committee member, what expectations do you have regarding KAU CLN Programme's Advisory Council Committee? *The response to question was by 5 participants/applicability to the respondent if a KAU/non KAU member*
 - Respondent 1: "Continuous efforts to improve, also improve counseling skills, reflections to be added or discussed"
 - Respondent 2: "Great selection of specialties"
 - Respondent 3: "High expectations of getting many ideas and improvements in the program outcomes"
 - Respondent 4: "It is expected to get several ideas on how to improve the program"
 - Respondent 5: "My expectation is that the committee will provide direction with leading up to date information and technology about current developments in the area of clinical nutrition education".

Dear external examiners for students research projects for KAU clinical nutrition program at the seminar day. This feedback survey was designed to improve and strengthen the research for KAU Clinical Nutrition Program. Your responses will be used for students' research evaluation & improvement

Feedback Survey of External Examiners for Student's Research Project (Academic year 2014-2015)

Name: _____ Institution: _____

Email: _____ Phone: _____

Participation in research

Table 1: Students Research Projects (final year projects) - examples of projects from the academic year (2008-2009 to 2015-2016). Continued

Clinical dietetics (e.g. Nutrition & Dietetic Practices & Services Evaluation)/ Health and Disease & Applied Nutrition Science

18.	Prevalence of pre-hypertension among students in faculty of Applied Medical Sciences aged between 19-25	2014- 2015	←
19.	Nutritional status in patients with chronic heart failure.	2014- 2015	
20.	Study the Impact of Garlic (<i>Allium sativum</i>), Nutmeg (<i>Myristicifragrans</i>) and Rosemary (<i>Rosmarinusofficinalis</i>) on Hypercholesterolemic Rats. 2014	2014- 2015	
21.	Nutritional status among patients with cardiovascular disease	2014- 2015	
22.	Hepatoprotective effect of turmeric and thyme on oxidative stress against CCL4 induced liver injury in rats	2014- 2015	
23.	Effect of herbal extract (green tea, mint and sage) on obesity induced by high fat diet in rats 2014	2014- 2015	
24.	A comparison of dietary intake with (rda) for colorectal cancer patient before and after different modulates of treatment.	2013- 2014	←
25.	Nutritional status of women with genital tumors	2013- 2014	
26.	Relationship between Vitamin D Deficiency and Arrhythmia. 1434-1435	2013- 2014	
27.	Knowledge, attitude, and behavior of young women towards dietary calcium intake.	2013- 2014	
28.	Effect of Antioxidant on Rats Fed Thermally Oxidized Oil (Frying Oil)	2013- 2014	←
29.	Effect of vitamins and minerals' supplementation on mammographic breast density.	2012- 2013	←
30.	Factors associated with dietary supplement use among gym attendees in Jeddah, KSA.	2012- 2013	
31.	Criteria of breastfeeding in association with intelligence quotient (IQ) score in preschool children.	2012- 2013	
32.	Dairy products and the metabolic syndrome.	2012- 2013	
33.	Nutritional Status of medical student females, King Abdulaziz University, Jeddah.	2012- 2013	
34.	The Effect of Phytoestrogen as a natural selective estrogen-receptor modulator (SERM) on breast cancer prevention.	2011- 2012	←
35.	The Nutritional status in patients with colorectal cancer pre and post-different modulates of treatment	2011- 2012	
36.	Dietary glyceimic load association with premenstrual symptoms in adolescent girls.	2011- 2012	
37.	Malnutrition and dietary intake of colorectal cancer patients before and after surgery, or other treatments.	2011- 2012	
38.	Bone Health Status among applied medical sciences female students at king Abdulaziz university, Jeddah	2011- 2012	
39.	The effect of blood sugar levels, measured by glyceimic index, on acne vulgaris in adolescents	2010- 2011	←
40.	Effect of (OMEGA-3) natural sources food intake on Post-Laser In Situ Keratomileusis (LASIK) Tear Dysfunction Syndrome	2010- 2011	
41.	The effect of soy supplement on manifestations accompanying per menopause. 2009	2010- 2011	
42.	Can dietary fiber intake affect the age at menarche?	2010- 2011	
43.	Attention deficit hyperactivity disorder (ADHD) and the effects of artificial food coloring on children	2009- 2010	←
44.	Effects of flaxseed as a food naturally rich in n-3 polyunsaturated fatty acids (PUFA) on rheumatoid arthritis (RA)	2009- 2010	
45.	Effect of diet on drug addict people	2008- 2009	←
46.	Can nutrition and diet affect your baby's gender	2008- 2009	
47.	Can a bulb of garlic a day keeps breast cancer away?	2008- 2009	
48.	Nutrition status of some children and adolescents with down syndrome in Jeddah	2008- 2009	

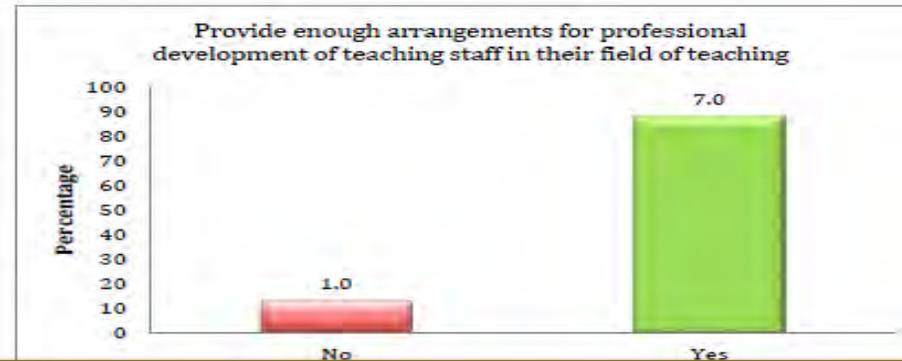
Table 1: Students Research Projects (final year projects) - examples of projects from the academic year (2008-2009 to 2015-2016).

No.	Public Health Nutrition	Academic year
1.	Saudi school meal study (SSMA): A cross sectional study that assess the impact of nutritional quality of school meals on children nutritional status and health	2014- 2015
2.	Prevalence of pre-hypertension among students in faculty of Applied Medical Sciences aged between 19-25	2014- 2015
3.	Assessing of KAU female section's physical environment, food and beverages options served by different caterers	2013- 2014
4.	Obesity and Vitamin D King AbdulAziz University, Jeddah	2013- 2014
5.	Biological age associated with nutritional Status and Life style Across Healthy Population Residing in Jeddah between Ages 19 – 65	2013- 2014
6.	Lifestyle factors associated with overweight and obesity among university students in Jeddah.	2012- 2013
7.	Nutritional Status of medical student females, King Abdulaziz University, Jeddah	2012- 2013
8.	Intelligence Quotient In Relation To Nutritional State and Food Intake of High School Students in Jeddah Life Science Journal	2012- 2013
9.	Studying the differences in food patterns and lifestyle among health college students and their mothers in Jeddah, Saudi Arabia	2012- 2013
10.	Nutritional Status by measurement the sensitivity and specificity for some of nutritional indicators for colorectal cancer patient before and after different modulates of treatment	2012- 2013
11.	Demographic and factors that affect the level of food consumption of women prisoners in Jeddah	2011- 2012
12.	Intelligence quotient in relation to nutritional state, food intake and physical activity of high school students in Jeddah	2011- 2012
13.	Bone Health Status among Applied Medical Sciences Female Students at King Abdulaziz University, Jeddah	2011- 2012
14.	Nutritional status, food intake and physical activity in preschool children.	2010- 2011
15.	A Study of nutritional status of pregnant women in King Abdulaziz University Hospital in Jeddah.	2009-2010
16.	Effect of food price rice on general health status of some poor family in Jeddah city	2008- 2009
	Eating Behaviors among adolescents at middle schools in Jeddah.	2008- 2009

Feedback Survey from the KAU CLN Advisory Committee

11. Looking at the departmental approaches followed for the continues professional development for faculty members, do you think that the department can

- a. Provide enough arrangements for professional development of teaching staff in their field of teaching



- b. Provide professional development with regards to knowledge and applications of research and other methods of developments such as allowing staff to attend national/international conferences and workshops

Provide professional development with regards to knowledge and applications of research and other methods of developments such as allowing staff to attend national/international conferences and workshops



The Online Student Satisfaction Survey

Survey completers (70%, n= 14) among the CLN students who completed the course “Students research Project” consisted of 20 female students in the academic year 2014-2105.

The students overall satisfaction about the course was “satisfied”, which rated as 3.72 out 5.00.

(Response was mainly on the quantitative questions).

The Feedback Surveys from the External Examiners (academic years 2014-2015)

- **In general**, examiners’ rating to students’ work and supervisors’ guidance was ranging from good to excellent. Both examiners were impressed and interested about all presented work and noticed the spirit of the teams’ hard work and dedication among all presenting groups.
- The examiners have recommended research areas to be included such as research about the awareness of healthy lifestyle in Saudi society and to compare it regionally and internationally.
- The other suggested area of research to be considered by the nutrition department was in genetics and epigenetic.
(Response from two examiners).

The Online Student Satisfaction Survey

The Feedback Surveys from the External Examiners (academic years 2014-2015)

17. How in general you rate students' presentation skills?

Excellent Very good Good Fair Poor

18. Do you think that the conducted and presented research was beneficial and could add something new to the health field and profession of nutrition and dietetics

Yes No

19. Which areas of research and resources do you believe need to be added to improve, enhance, or expand the research conducted by KAU clinical nutrition students?

Awareness of healthy life style in our society and compare it with other gulf countries.

20. What has most impressed you about students' research projects of KAU clinical nutrition program?

All indeed were impressive and interesting, keep on this excellent work

18. Do you think that the conducted and presented research was beneficial and could add something new to the health field and profession of nutrition and dietetics

Yes No

19. Which areas of research and resources do you believe need to be added to improve, enhance, or expand the research conducted by KAU clinical nutrition

In the area of Genetics and Epigenetic

20. What has most impressed you about students' research projects of KAU clinical nutrition program?

Spirit of team work, dedication, and hard work

21. What has disappointed you about the students' research projects of KAU clinical nutrition program?

Nothing, I wish you all the best and to continue motivating your students to do research and publish them in respectable journal.

Many thanks for completing the survey and return it back to the head of the department

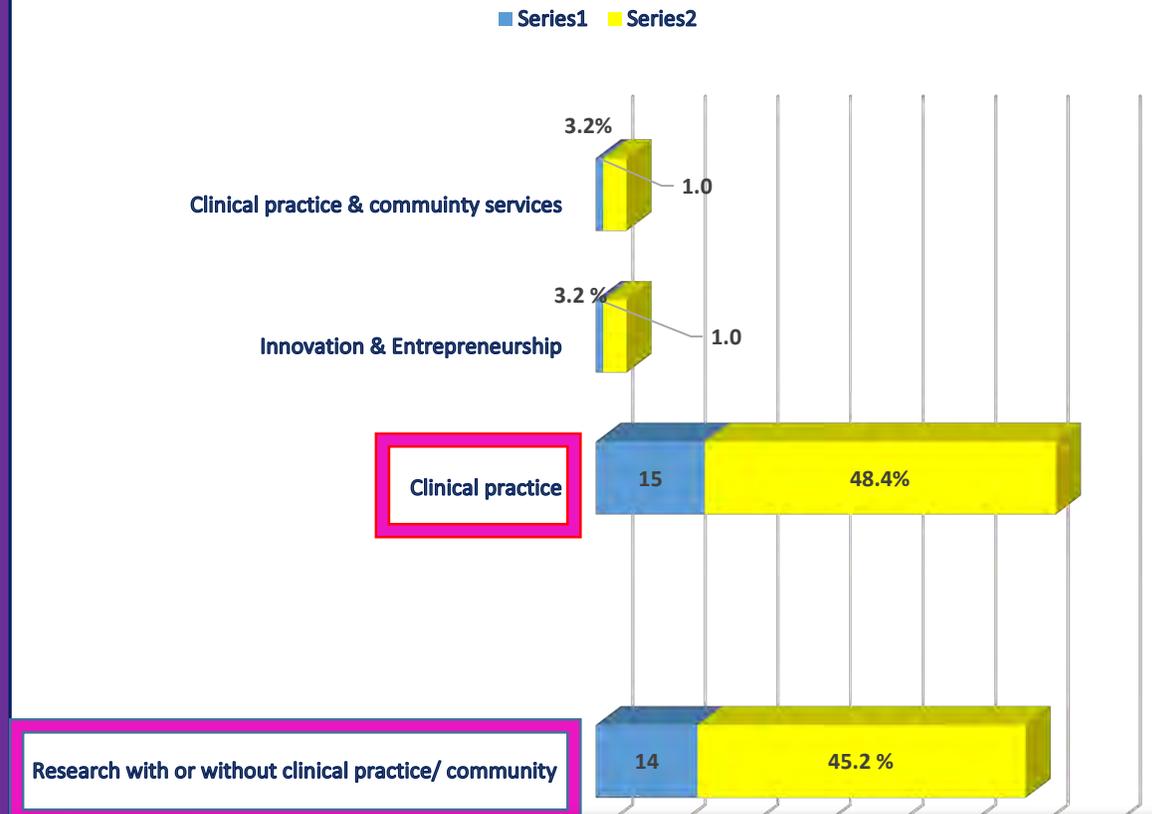
Dr/ Elham Aljaaly: Head of Clinical Nutrition Program & Coordinator of Students' Research Projects for the Academic year 2015-2016

Graduates Feedback Survey(academic years 2014-2015) [188 graduates and A response from 18% (n=33)]

Results

Graduation Year	Number of Graduates
2008 -2009	31 students
2009 -2010	34 students
2010- 2011	31 students
2011- 2012	19 students
2012- 2013	21 students
2013- 2014	24 students
2014- 2015	28 students

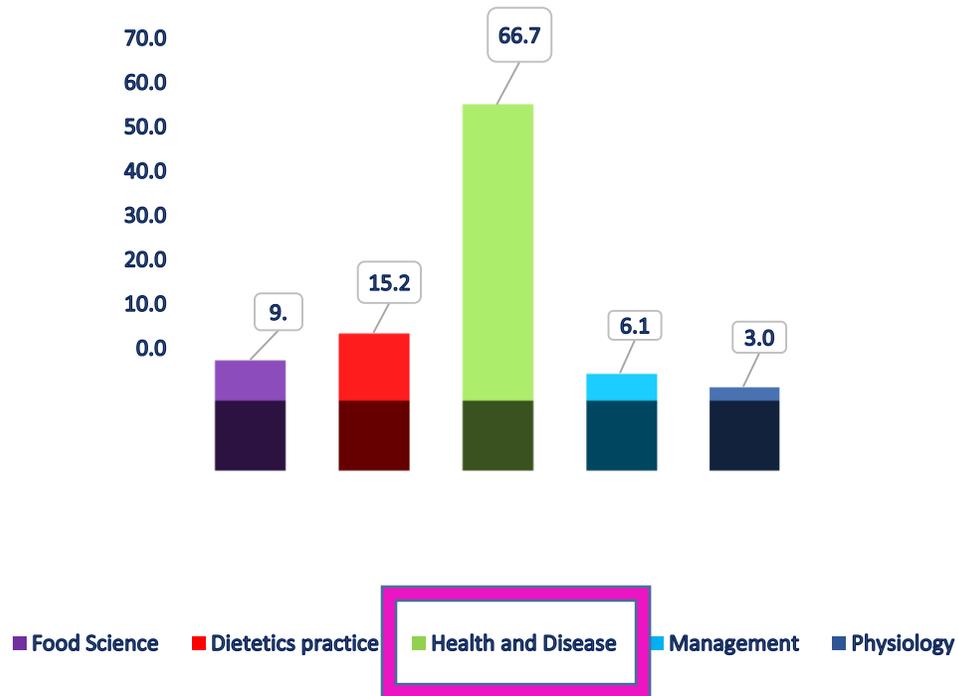
What did you learn in your KAU CLN undergraduate programme was most applicable (useful or most vital) to your current position?



Most applicable learned by graduates in their current position

Graduates Feedback Survey(academic years 2014-2015) [188 graduates and A response from 18% (n=33)]

In which area was your graduation research project?



Research area for the conducted students' research projects

Table 4: Response to surveys concerning publication, research, audit and further involvement in research

Survey question	NO	Yes
Was your CLN graduation research project published?	25 (80.6)	6 (19.4)
If yes, was the journal related to the Filed/profession??	1 (33.3)	2 (66.7)
If yes, in which type of Journals was published?	31 (93.9)	2 (6.1)
- Peer-reviewed Journal		
- Non-peer-reviewed Journal		
Do you think that your CLN training programme prepared you well to undertake research?(n= 33)	15 (47)	17 (53)
Based on your understanding of the terms 'research' and 'audit', do you think that the two terms have different meaning?	9 (27.3)	23 (69.7)
Do you think that audit is an important part of your role as a dietitian?	8 (24.2)	22 (66.7)
Are you pleased about your further involvement in research and audit after graduation?	14 (46.7)	16 (53.3)
Do you think that your CLN training programme helped you to be confident about undertaking audit?	17 (53.1)	15 (46.9)
Have you ever been involved in further research and/or audit after graduation?	17 (54.8)	14 (45.2)
Did the evidence of your research been utilized in any decision making were you worked or in healthcare or community settings.	21 (87.5)	3 (12.5)

Achievements & Rewards

For the past 2 years
(2014/15 & 2015/16)



Report on winning in the research of
Effect of Dietary Omega-3- Fatty Acid Intake on Post LAISK Dry
Eye Syndrome

Done by: Walaa Asaad, Lama Sultan, Rufaida Saber

Supervised by: Dr. Nahlaa Khalifa.

In the last 2 academic year, senior students have conducted 19 research projects, of which 5 were published.

Faculty members published 26 manuscripts, which included some of students' projects

Senior students won the corner competition at the Faculty of Applied Medical Sciences in the 10th student annual meeting 2014"

One of the research groups won the 1st position in the 4th scientific conference of the male and female student of higher education in Kingdom of Saudi Arabia.



Conclusion & Recommendations

- ✓ The quality of research activities can be monitored and evaluated using different performance indicators, including feedback surveys and internal and external benchmarking suitable for higher education
- ✓ It should always has a call for a diaspora of alumni students (researchers) in the field of nutrition and dietetics those working in different geographical locations in the world, to ensure research quality for CLN programme by providing their experience and support to the teaching and learning process and practice of research
- ✓ This consequently will help in supporting future efforts to reduce the skill gaps and to establish and sustain a national/regional structures in research in an intelligent way.

Acknowledgment
For those who
participated in collecting
data related to this work

**Thank
you**

*Acknowledges for the thirty-three graduates
of Nutrition and Dietetics in the academic
year 2008-2009 to 2014-2015 who had
responded to the alumni feedback survey.*

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