

Research and Professional Briefs

Continued Need for Increased Emphasis on Aging in Dietetics Education

LAUREN Q. RHEE, MS, RD; NANCY S. WELLMAN, PhD, RD, FADA; VICTORIA H. CASTELLANOS, PhD, RD; SUSAN P. HIMBURG, PhD, RD, FADA

ABSTRACT

This study examined the content on aging in dietetics curricula via the Internet and a follow-up questionnaire. Only 14% to 15% of programs were not online. The 203 undergraduate and 88 graduate program Web sites listed 44 (22%) undergraduate and 39 (44%) graduate courses in aging. However, more maternal and child courses were listed. The number of undergraduate aging courses was similar to the 20% reported in 1989, although methodologies differed among the studies. Life cycle and community nutrition courses had the most aging content. More than half of program directors were not satisfied with the aging curriculum content. Integrating aging material into existing courses was the most acceptable way of increasing aging content. The common barriers were "curriculum already full" and "lack of faculty expertise." As the nation's changing demographics are reshaping the dietetics marketplace, a greater emphasis on aging would enable students to be more effective in serving this booming population.

J Am Diet Assoc. 2004;104:645-649.

Eighty-seven percent of older Americans have chronic diseases that can be ameliorated or reduced with appropriate nutrition therapy, and 40% of community-residing older adults have inadequate nutrient in-

takes (1). The Institute of Medicine noted, "Evidence exists to conclude that nutrition therapy can improve health outcomes for several conditions that are highly prevalent among Medicare beneficiaries. . ." (1).

Registered dietitians were identified by the Institute of Medicine as the single group with the standardized education and clinical training necessary to be directly reimbursed through Medicare as providers of nutrition therapy (1). However, the low knowledge, attitudes, and work preferences toward older adults in a study of 299 dietetics students at 10 universities indicated a widespread need for improved education about aging (2).

The American Dietetic Association (ADA) position paper on aging recommended more education on aging to meet demographic projections (3). ADA Standards of Practice have outlined competencies for working with older adults (4,5). The emphasis continues to be on evidence-based practice, and new studies are defining the effectiveness of nutrition therapy in diverse settings serving older adults (6-8).

In 1987, Shoaf and Kotancheck first questioned the quantity and type of experiences with older adults in dietetics internships and coordinated programs (9). Shoaf and Jensen found insufficient didactic and experiential training in aging in undergraduate programs in 1989 (10). This study used an Internet approach to examine the content on aging in dietetics curricula and included a follow-up questionnaire.

METHODS

This study began with a national online search for the 339 didactic undergraduate (n=235) and graduate (n=104) dietetics programs in the ADA's Directory of Dietetics Programs, 1999-2000 (11). Because the focus was on undergraduate curricula, graduate programs were reviewed online only if an undergraduate program was listed. From online catalogs or Web pages, aging-related nutrition courses were recorded. Other variables, such as maternal and child courses, university/college membership in the Association for Gerontology in Higher Education (AGHE), and campus presence of a gerontology program or center, were also recorded. Data collection was dependent on the sophistication of each Web site's search engine.

To verify the aging-related courses identified online, program directors were contacted electronically or via facsimile. A reminder was sent a month later. Response rates were 47% from undergraduate (n=95) and 43% from graduate (n=38) directors. The closed- and open-ended questions probed curricular details and faculty

L. Q. Rhee is the director of the Bionutrition Core, Georgetown University Medical Center, General Clinical Research Center, Children's National Medical Center, Pediatric Clinical Research Center, Washington, DC.

N. S. Wellman is a professor in the Department of Dietetics and Nutrition and the director of the National Policy and Resource Center on Nutrition and Aging, and V. H. Castellanos is an associate professor in the Department of Dietetics and Nutrition and the director of the Long-Term Care Institute, Florida International University, Miami. S. P. Himburg is a professor in the Department of Dietetics and Nutrition, Florida International University, Miami.

Address correspondence to: Nancy S. Wellman, PhD, RD, FADA, National Policy and Resource Center on Nutrition and Aging, Florida International University, OE 200, Miami, FL 33199.

E-mail: wellmann@fiu.edu

Copyright © 2004 by the American Dietetic Association.

0002-8223/04/10404-0023\$30.00/0

doi: 10.1016/j.jada.2004.01.016

Table 1. Perceptions about aging curricula content from dietetics and nutrition program directors

Variable	Undergraduate ^a (n=94)		Graduate (n=38)	
	No.	%	No.	%
Satisfaction with current curriculum content on aging				
Not satisfied	51	54	24	63
Satisfied	38	41	13	34
Undecided	5	5	1	3
How they would increase curriculum content on aging^b				
Integrate aging material into current courses	70	75	23	61
Have written assignments and field experiences	51	54	17	45
Develop new course, gerontologic/geriatric	28	30	16	42
The curriculum does not need any changes	7	7	6	16
Other	3	3	1	3
Perceived barriers to increasing gerontologic/geriatric content^b				
Curriculum already full	65	69	22	58
There are no barriers	16	17	3	8
Lack of funds	15	16	9	23
Lack of faculty expertise	11	12	12	32
Student resistance/lack of interest	11	12	8	21
Faculty resistance/lack of interest	4	4	5	13
Other	3	3	1	3

^an=95; one program director did not answer the three questions in Table 1.
^bRespondents could select one or more choices.

aging expertise. If there was no response from a director, the online data were used as published.

The Statistical Package for the Social Sciences (version 10.0, 1999, SPSS Inc, Chicago, IL) was used for descriptive data analysis.

Finally, syllabi of nutrition and aging courses were requested from 51 undergraduate and 35 graduate directors. Permission to post online was requested.

RESULTS AND DISCUSSION

Online Curricular Information

Online information was collected from 203 (86%) undergraduate and 88 (85%) graduate dietetics and nutrition programs. In these programs, 44 (22%) had undergraduate (mainly upper division) and 39 (44%) had graduate courses in aging. The 22% of undergraduate aging courses was similar to the 20% reported in 1989 (10). Because 85% of curricula were available online, it allowed comparison with the 1989 study, although methodologies differed considerably. Studies of curricula in health and social service disciplines have shown inadequate student preparation in aging (12-17).

There were, however, more maternal and child courses (31% undergraduate, 51% graduate), and these topics generally had a higher priority in the curriculum. A similar emphasis on pediatrics vs geriatrics in US medical schools has been called a national crisis, ie, all 125 US medical schools have pediatric departments, but only three have geriatric departments (18).

About half of the universities studied had gerontology programs and were members of AGHE; 22% had gerontology centers. These centers, programs, and/or affilia-

tions offer opportunities to improve curricular content in aging through team teaching, guest lectures, curricula models, etc. Wallace and colleagues found a weak but not significant relationship between the strongest aging curricula in public health programs and the presence of gerontology centers (15).

Program Director Responses

More than half of program respondents were not satisfied with the current curriculum content on aging (Table 1). Similarly, most physical therapy education programs affirmed a need for more aging content (13).

Integrating aging material into existing courses was the most acceptable way of increasing aging curricula content in undergraduate and graduate programs. Other methods included written assignments, field experiences, and development of a new course. Integration into current courses was also the most popular suggestion for increasing aging content by nursing and physical therapy programs (12,13).

The most commonly perceived barrier to implementing any changes in both undergraduate and graduate programs was "curriculum already full." These findings are similar to those of 14 years ago, when 49% of coordinated dietetics programs without an aging course would not consider adding one because of time constraints, lack of faculty, and satisfaction with current curriculum (10).

Responses indicated that programs had one to 33 full-time and part-time undergraduate faculty (nonadjunct). When asked "How many full- and part-time dietetics and nutrition faculty members in your department have a background or research interest in gerontology/geriat-

Table 2. Inclusion of aging content in undergraduate dietetics and nutrition courses reported by program directors (n=95)

Course title	No. of courses	None		Minimal		One Lecture		Two or More Lectures		Assignment or Field Experience		Other	
		No.	%	No.	%	No.	%	No.	%	No.	%	No.	%
Nutrition ^a	70	2	3	29	41	16	23	15	21	6	9	2	3
Life cycle nutrition ^b	64	0	0	7	11	3	5	38	59	14	22	2	3
Community nutrition ^c	78	0	0	17	28	6	8	39	50	24	31	2	3
Nutrition therapy ^d	87	7	8	41	47	4	5	17	20	9	10	9	10
Other ^e	17	0	0	8	47	3	18	2	12	3	18	1	6

^aIncludes Introductory Nutrition, Basic Nutrition, Elementary Nutrition, Principles of Nutrition, Normal Nutrition, Fundamentals of Nutrition, Perspectives in Nutrition, Foundations in Nutrition, Nutrition Concepts, and Science of Nutrition. Respondents could select one or more choices.

^bIncludes Life Span Nutrition, Developmental Nutrition, Nutrition in Life Span, Nutrition throughout Life Cycle, Nutrition and the Life Cycle, Nutrition for Life, and Family and Health Across Life Span. Respondents could select one or more choices.

^cIncludes Community Nutrition, Community Nutrition and Education, and Family and Community Nutrition. Respondents could select one or more choices.

^dIncludes Medical Nutrition Therapy, Diet Therapy, Clinical Dietetics, Clinical Nutrition, Clinical Nutrition and Disease, Diet and Disease, Nutrition and Disease, Nutrition in Health and Disease, Therapeutic Nutrition and Assessment, Nutritional Aspects of Disease, Therapeutic Nutrition, Advanced Nutrition, Applied Nutrition, and Diet Selection and Planning. Respondents could select one or more choices.

^eIncludes Nutrition Assessment, Nutrition Counseling, Nutrition Education, and Macronutrients/Micronutrients. Respondents could select one or more choices.

rics?", undergraduate directors (n=95) reported that 28% had two or more full-time faculty, 38% had one, and 34% had none.

In graduate programs, the second most commonly perceived barrier was lack of faculty expertise in aging. Other barriers for graduate programs included lack of funds, faculty resistance/lack of faculty interest, and student resistance/lack of student interest. Studies in health disciplines found similar barriers (13,19). Graduate program respondents (n=38) reported one to 37 departmental faculty, with 37% having two or more faculty in gerontology/geriatrics; 26% having one faculty; and 37% having none.

Although the response rates (47% undergraduate, 43% graduate directors) limit generalization, only 14% had undergraduate courses on aging, compared with the 22% found in the online review. Thus, it is possible that respondents were more concerned than the overall population of undergraduate directors about the lack of material on aging in the curricula.

Aging Content in Dietetics and Nutrition Courses

Life cycle and community nutrition had the most aging content in the form of two or more lectures (Table 2). Other courses, such as those in nutrition and nutrition therapy, had minimal content. Although methods differed between this and the 1989 study, these findings contrast the earlier study, which found more aging content in basic nutrition courses than in other nutrition courses (10).

Aging Course Syllabi

The 14 syllabi that were collected and posted (see <http://www.fiu.edu/~nutreldr>) included four undergraduate,

seven graduate, and three combined level courses. All submitted syllabi were posted in keeping with the philosophy of the 1995-96 AGHE Program Development Committee that "faculty could do their own evaluation of the usefulness of one another's syllabi" and that posting all would best supplement the three Nutrition and Aging courses listed in the two-volume AGHE Collection of Syllabi for Courses in Aging (20).

Many national groups have called attention to the need for improvements in aging education to meet the nation's geriatric health care shortage (18,21-23). The ADA environmental scan found that the nation's changing demographics are reshaping the marketplace for dietetics (24). As a result, aging recently became an ADA strategic focus.

CONCLUSIONS

The profession now has a compelling mandate to improve education in aging. The following actions are suggested.

- A national aging summit should be convened to allow experts to determine content areas and domains for dietetics education.
- Education programs should reconsider the balance among the study of life cycle groups. Because life cycle and other courses spend relatively little time on older adults, the requirement of a nutrition and aging course should be considered.
- Dietetics educators should more fully incorporate aging into existing nutrition courses and field experiences. Interdepartmental teaching of aging may be needed. Course assignments can be improved to enhance learning about older adults.
- Faculty development, including externships in older adult wellness and varied care settings, would generate

excitement that could enhance classroom teaching about aging. Interdisciplinary curricula models can be developed, implemented, evaluated, and disseminated (25,26).

- Dietitians working with older adults must see themselves as change agents who can influence the education and training in local programs. As role models, they should have more interactions with students and faculty.
- Students should be exposed to the heterogeneity of aging, from healthy, active older adults to dependent institutionalized people. For example, the Older Americans Act Nutrition Program has shown the positive impact of nutrition by providing meals and other nutrition services in homes and community dining centers (27). Phase II-III cardiac rehabilitation facilities can expose students to recovering patients making lifestyle changes in diet and exercise. Nursing home rotations can prepare students to provide clinical care to the very old and can provide dynamic management and foodservice experience. Positive experiences have improved student attitudes and increased interest in working with older adults (28,29).

This study was supported in part by grant 90AM2390 from the Administration on Aging, US Department of Health and Human Services, Washington, DC.

References

1. Institute of Medicine, Committee on Nutrition Services for Medicare Beneficiaries. *The Role of Nutrition in Maintaining Health in the Nation's Elderly: Evaluating Coverage of Nutrition Services for the Medicare Population*. Washington, DC: National Academy Press; 1999.
2. Kaempfer D, Wellman NS, Himburg SP. Dietetics students' low knowledge, attitudes, and work preferences toward older adults indicate need for improved education about aging. *J Am Diet Assoc*. 2002;102:197-202.
3. Position of The American Dietetic Association. Nutrition, aging, and the continuum of care. *J Am Diet Assoc*. 2000;100:580-595.
4. Shaof LR, Bishirjian KO, Schlenker ED. The gerontological nutritionists standards of professional practice for dietetics professionals working with older adults. *J Am Diet Assoc*. 1999;99:863-867.
5. Gilmore SA, Neidert KC, Leif E, Nichols P. Standards of practice criteria: Consultant dietitians in health care facilities. *J Am Diet Assoc*. 1993;93:305-308.
6. Splett PL, Roth-Yousey LL, Vogelzang JL. Medical nutrition therapy for the prevention and treatment of unintentional weight loss in residential healthcare facilities. *J Am Diet Assoc*. 2003;103:352-362.
7. Kretser AJ, Voss T, Kerr WW, Cavadini C, Friedmann J. Effects of two models of nutritional intervention on homebound older adults at nutritional risk. *J Am Diet Assoc*. 2003;103:329-336.
8. Bernstein MA, Nelson ME, Tucker KL, Layne J, Johnson E, Nuernberger A, Castaneda C, Judge J, Buchner D, Singh MA. A home-based nutrition intervention to increase consumption of fruits, vegetables, and calcium-rich foods in community dwelling elders. *J Am Diet Assoc*. 2002;102:1421-1427.
9. Shoaf LR, Kotanchek NS. Training in geriatrics for future dietitians. *J Am Diet Assoc*. 1987;87:330-333.
10. Shoaf LR, Jensen HM. Inclusion of geriatric nutrition in ADA-approved undergraduate programs. *J Am Diet Assoc*. 1989;89:1282-1285.
11. The American Dietetic Association. *The Directory of Dietetics Programs: 1999-2000*. Chicago, IL: American Dietetic Association; 1999.
12. Earthy A. A survey of gerontological curricula in Canada: Generic baccalaureate nursing programs. *J Gerontol Nurs*. 1993;12:7-14.
13. Granick R, Simson S, Wilson LB. Survey of curriculum content related to geriatrics in physical therapy education programs. *Phys Ther*. 1987;67:234-237.
14. Aiken FE. Gerontological curricula in Canadian baccalaureate occupational therapy programs. *Gerontol Geriatr Educ*. 1997;18:51-63.
15. Wallace SP, Levin J, Villa V, Beck JC. The need for an increased emphasis on health and aging in public health education. *Gerontol Geriatr Educ*. 1998;18:45-62.
16. Tilliss TSI, Lavigne SE, Williams K. Geriatric education in dental hygiene programs. *J Dent Educ*. 1998;62:319-324.
17. Reuban DB, Fink A, Vivell S, Hirsh SH, Beck JC. Geriatrics in residency programs. *Acad Med*. 1990;65:382-387.
18. From the International Longevity Center. A National Crisis: The Need for Geriatrics Faculty Training and Development Toward Functional Independence in Old Age. 2002. Available at: http://www.ilcusa.org/_lib/pdf/ilcreport.pdf. Accessed March 31, 2003.
19. Damron-Rodriguez J, Lubben JE. Multidisciplinary factors in gerontological curriculum adoption in schools of social work. *Gerontol Geriatr Educ*. 1994;14:39-52.
20. Association for Gerontology in Higher Education. *AGHE Collection of Syllabi for Courses in Aging. Vol I, Core Courses; Vol II, Elective Courses*. Washington, DC: Association for Gerontology in Higher Education; 1997.
21. National Institute on Aging. *Personnel for Health Needs of the Elderly Through Year 2020*. Washington, DC: National Institute on Aging, US Department of Health and Human Services; 1987.
22. Health Resources and Services Administration. *A National Agenda for Geriatric Education: White Papers. Vol 1, Forum Report; Vol 2*. Rockville, MD: US Department of Health and Human Services; 1995.
23. From the Alliance for Aging Research. Medical Never-Never Land: Ten Reasons Why America is Not Ready for the Coming Age Boom. 2002. Available at: <http://www.agingresearch.org/brochures/nevernever/nevernever.pdf>. Accessed March 31, 2003.
24. Jarratt J, Mahaffie JB. Key trends affecting the dietetics profession and the American Dietetic Association. *J Am Diet Assoc*. 2002;102(suppl):S1821-1839.
25. Silver S. A multidisciplinary allied health faculty team: Formation and first-year production of prob-

- lem-based learning in gerontology/geriatrics. *J Allied Health*. 1998;27:83-88.
26. Silver S, Turkey C, Laird J, Majewski T, Maguire B, Orndorff J, Rice L, Vowels R. Multidisciplinary team dynamics in the production of problem-based learning cases in issues related to older adults. *J Allied Health*. 1999;28:21-24.
27. Administration on Aging. Serving Elders at Risk: The Older Americans Act Nutrition Programs National Evaluation of the Elderly Nutrition Program, 1993-1995. Available at: <http://www.aoa.gov/aoa/pages/nutreval.html>. Accessed March 31, 2003.
28. Rasor-Greenhalgh SA, Stombaugh IA, Garrison ME. Attitude changes of dietetic students performing nutritional assessment on healthy elderly. *J Nutr Elderly*. 1993;12:55-64.
29. Adelman RD, Fields SD, Jutagir R. Geriatric Education Part II: The effect of a well elderly program on medical student attitudes toward geriatric patients. *Am Geriatr Soc*. 1992;40:970-973.