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History of Botanical Use as Medicinals

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Demographic Factors and Beverage Consumption Patterns: Health literacy, education and income level

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Background

Nine out of ten American adults may have difficulty using the health information that is available every day in grocery stores, doctor's offices, and the media, such as health insurance forms, and nutrition labels.[1] According to results from the 2003 National Assessment of Adult Literacy, 14% of adults (about 30 million people) have below basic health literacy.[1] Health literacy is defined as "the degree to which individuals have the capacity to obtain, process, and understand basic health information and services needed to make appropriate health decisions".[2] Health literacy can also be more broadly defined as a person's ability to understand and navigate the health care system effectively. Health literacy not only requires basic literacy but also information about and understanding of general health topics.[3]

Due to the widespread nature of the problem of low health literacy, organizations such as the Centers for Disease Control and Prevention (CDC), United States Department of Health and Human Services (DHHS), Institute of Medicine (IOM), and National Institutes of Health (NIH) are addressing this problem by developing a national action plan to improve health literacy, offering training for healthcare providers, and researching techniques to help further improve and promote health literacy.[4, 5, 6, 7] Further, one of the proposed objectives for Healthy People 2020 is to improve health literacy through increasing the number of people who receive easy-to-understand directions from healthcare providers, are asked to repeat directions given to them by healthcare providers, and are offered help when filling out a form at a healthcare provider's office.[8]

Limited health literacy has been correlated to decreased use of preventive services, poor health outcomes and increased healthcare costs.[3] Those most at risk for low health literacy include those with poor health status, racial and ethnic minorities, older adults, and individuals with less than a high school degree or general equivalency diploma (GED), low income, and/or speak English as a second language.[1]

In recent decades, there has been an increase in calories consumed from beverages in the U.S. Caloric consumption from all types of beverages in 2002 totaled 458 kcal/d, resulting in 21% of total calories coming from beverages alone compared to 18.5% in 1988 and 14% in 1977.[9] From 1999-2004, young adults with less than a high school education and people with lower income (≤ 130% of the poverty level) had the highest contribution of daily calories from sugar-sweetened beverages.[10] Additionally, a study conducted in New York City found that frequent soda consumption is also associated with overweight/obese weight status and sedentary behaviors.[11]

To date, only one study has evaluated the relationship between health literacy and sugar-sweetened beverage consumption; those authors reported that health literacy

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and sugar-sweetened beverage consumption were inversely related.[12] Specifically, an extra 119 kcal/day was consumed by individuals within the lowest health literacy group (score of 0-1 on the Newest Vital Sign (NVS) health literacy assessment tool) as compared to the adequate health literacy group (score of 4-6 on the NVS). The NVS is a health literacy tool that has six questions and only takes three minutes to complete.[2] This tool evaluates both document and quantitative skills.[13] Even though socioeconomic status and education levels are often used to predict dietary quality and sugar-sweetened beverage consumption, this investigation showed that health literacy had the strongest relationship with sugar-sweetened beverage consumption and total Healthy Eating Index (HEI) (a tool used to assess dietary quality based on the 2005 Dietary Guidelines) scores.[12] If health literacy is an important predictor of overall beverage consumption, water consumption, and/or sugar-sweetened beverage consumption, interventions targeting these factors could be developed. The purpose of the current study was to determine which demographic characteristics serve as predictors of sugar-sweetened beverage consumption, water consumption, milk consumption, and total beverage calorie intake.

Methods

This study consisted of one laboratory session occurring during the fall of 2008, which included measurement of height and weight, completion of a self-reported beverage intake questionnaire (BEV-Q)[14] and an abbreviated version of the Test of Functional Health Literacy (S-TOFHLA).[15] The BEV-Q is a validated tool which assesses habitual intake of nineteen different commonly consumed beverages.[14] The abbreviated version of the S-TOFHLA is a tool and was used in this study due to its ability to test reading comprehension, availability in both English and Spanish, and 7-minute administration time. This abbreviated version consists of 36 reading comprehension questions from the original S-TOFHLA where each question is worth one point.[16, 17] To be eligible for the study, individuals needed to be an adult parent between the ages of 19-65 years with at least one child between the ages of 2-17 years living at home. Participants were compensated with a $10 Wal-Mart gift card. This study was approved by Virginia Tech's Institutional Review Board and the University of Nebraska's Institutional Review Board.

Statistical analyses were conducted using SPSS statistical analysis software (version 12.0 for Windows, 2003, SPSS, Inc., Chicago, IL). Pearson bivariate correlational analyses were used to assess relations between the continuous variables of BMI, age, or S-TOFHLA score and habitual daily sugar-sweetened beverage consumption (kcal and fluid ounces), water consumption (grams), milk consumption (kcal), and average daily beverage consumption (kcal). One-way analysis of variance (ANOVA) was used to determine possible differences within categorical variables including BMI category, S-TOFHLA category, gender, education level, income level, and race category and the aforementioned beverage categories. Post-hoc tests were conducted using Student-Newman-Keuls (SNK). Significant differences were then entered into multivariate linear regression models (method: "enter") to determine the relation between several independent variables (ie, demographic factors) and one dependent variable (ie, sugar-sweetened beverage consumption). Independent t-tests were also performed to analyze gender differences in beverage consumption. The race variable was dummy coded with "black" as the base group and males were the base group for the gender variable. Continuous variables are presented as mean ± SEM. Significance is reported at p-values ≤ 0.05.

Results

Sample population demographic characteristics are presented in Table 1. Approximately 70% of participants were overweight or obese, and more than half reported their race as either white or black. Almost one-fourth of this sample was American Indian/Native American. Most study participants had completed high school, and had adequate health literacy (S-TOFHLA ≥23).

The amount of water habitually consumed (g) was found to be significantly associated with education level ($p=0.020$), income level ($p=0.017$), and race category ($p<0.001$). In addition, habitual water consumption differed according to S-TOFHLA category, education levels, income levels, and race category. Individuals with inadequate health literacy consumed more water (1422 ± 0g) as compared to those

Table 1

Sample population demographic characteristics (n=334)

Variable	Frequency (n)	Percent (%)	Mean ± SEM	Range
Age			35.2 ± 0.5	18-65
Gender				
Male	51	15.3		
Female	282	84.4		
BMI (kg/m^2)			30.6 ± 0.4	17.2-57.5
BMI Category (kg/m^2)				
Underweight (<18.5)	4	12		
Normal Weight (18.5-24.9)	82	24.6		
Overweight (25-29.9)	99	29.6		
Obese (≥ 30)	143	42.8		
Race				
White	115	34.4		
Black	95	28.4		
American Indian/Native				
American	76	22.8		
Other[a]	47	14.1		
Education Level				
Did not graduate HS	43	12.9		
HS graduate	78	23.4		
Some college/ 2 yr. degree	99	29.6		
4 yr. college graduate	41	12.3		
More than 4 yr. degree	65	19.5		
Income Level				
$<10,000 - 29,999	51	15.3		
$30,000 - 59,999	44	21.3		
$60,000 or more	63	18.9		
S-TOFHLA Score			34.2 ± 0.2	13-36
Adequate health literacy (23-36)	329	98.5		
Marginal health literacy (17-22)	3	0.9		
Inadequate health literacy (0-16)	2	0.6		

[a]Other includes Asian, Native Hawaiian or Pacific Islander, Multiracial, and Hispanic.

with marginal health literacy (341 ± 108g), although these individuals represented <2% of the sample. Participants with a four year college degree or more consumed significantly more water (1062 ± 84g and 1068 ± 67g, respectively) than those who did not graduate from high school (763 ± 82g). The two highest income categories consumed more water (1050 ± 64g and 1095 ± 88g, respectively) than the lowest income category (800 ± 81g). Whites (1088 ± 53g) and American Indian/ Native Alaskans (968 ± 63g) in this sample drank significantly more water than blacks (725 ± 54g).

Significant correlations were found between S-TOFHLA scores and daily sugar-sweetened beverage (SSB) consumption (kcal) (r= -0.164, p=0.003) as well as with age and daily SSB consumption (kcal) (r= -0.154, p= 0.029). With respect to ANOVA and t-test results, it was determined that men consumed more SSB energy than women (448 ± 85 kcal vs. 259 ± 19 kcal, respectively; p=0.001). Daily SSB consumption (kcal) was different according to level of education (p<0.001), income (p=0.05), and race (p<0.001). Significant group differences according to education and race were also seen in relation to daily SSB consumption (kcal). Significantly higher consumption was observed in those who had not graduated from high school (354 ± 53 kcal), graduated from high school (372 ± 54 kcal), or had some college/ two year college degree (349 ± 44 kcal) as compared with those who attained a four year college degree (180 ± 30 kcal) or higher (120 ± 21 kcal). In addition, blacks (426 ± 52 kcal) and American Indian/Native Alaskans (346 ± 49 kcal) consumed significantly more SSB than the other race category (226 ± 32 kcal) and whites (159 ± 19 kcal). With regard to daily SSB consumption (fl. oz.), race was the only significant relationship (p=0.021). However, the p-value approached significance in the association between BMI and mean daily SSB fluid ounces (data not shown) and was included in the regression model.

Both S-TOFHLA scores (r= -0.141, p=0.01) and age (r= -0.154, p= 0.005) correlated with average daily habitual total beverage energy. Gender was also associated with daily habitual total beverage energy with men consuming significantly more daily beverage calories than women (802 ± 112 kcal vs. 540 ± 34 kcal, respectively; p= 0.005). Significant differences determined by ANOVA were seen with average total beverage consumption (kcal) and education (p=0.006), income (p=0.021), and race (p=0.001). Group differences according to education level, income level, and race category were also noted. The lowest income group was found to consume more energy from beverages (618 ± 126 kcal) than the highest income category (304 ± 31 kcal). Those with more than a four year college degree had lower total habitual daily beverage energy consumption (332 ± 31 kcal) as compared to those with a four year college degree (570 ± 128 kcal), with some college/two year degree (621 ± 62 kcal), those who graduated from high school (690 ± 81 kcal), and those who did not graduate from high school (676 ±84 kcal). Also, blacks consumed significantly more daily beverage energy (771 ± 81 kcal) than whites (437 ± 51 kcal) and other races (528 ±

Table 2
Demographic variables, BMI, and S-TOFHLA scores were used to predict sugar-sweetened beverage intake (kcal/day, fl oz/day), water intake (grams/day), and total beverage intake (kcal/day)

Demographic Variables	SSB (kcal/d)		SSB (fl. oz./d)		Water (gm/d)		Total Beverage (kcal/d)	
b	p-value	b	p-value	b	p-value	b	p-value	
Age	0.007	0.932	--	--	--	--	-0.038	0.650
Gender[a]	-0.152	0.045	--	--	--	--	-0.056	0.482
BMI	--	--	0.094	0.091	--	--	--	--
Race[b]								
White	-0.401	<0.001	-0.175	0.009	0.302	0.008	-0.157	0.177
Am. Indian/	-0.279	0.001	-0.150	0.021	0.096	0.277	-0.175	0.055
Native Alaskan								
Other[c]	-0.203	0.022	-0.128	0.040	0.124	0.176	-0.098	0.291
Education level	-0.133	0.216	--	--	0.021	0.848	0.064	0.568
Income level	-0.001	0.991	--	--	0.065	0.497	-0.175	0.086
S-TOFHLA score	0.026	0.764	--	--	--	--	-0.136	0.133
R-squared	0.186		0.038		0.088		0.103	
Model significance	p< 0.001		p= 0.013		p= 0.015		p= 0.035	

[a]Male was used as the base group for the gender variable. [b]Black was used as the base group for the race variable.
[c]Other includes Asian, Native Hawaiian or Pacific Islander, Multiracial, and Hispanic.

54 kcal). Milk consumption (kcal) was not found to be associated with any of the factors examined, and was therefore not included in the regression analyses.

Multivariate linear regression models were created based on the significant associations detailed above. As presented in Table 2, regression models for water (gm/d), SSB (kcal/d and fl. oz./d), and total beverage calories (kcal/d) consumed were generated. The models were able to account for more variance in mean daily habitual SSB consumption (kcal) (R^2=0.186, p<0.001) and average daily beverage energy (R^2=0.103, p=0.035) than in the models for water consumption (gm) (R^2=0.088, p=0.015) and average daily SSB consumption (fl. oz.) (R^2=0.038, p=0.013). However, none of the models accounted for a high amount of variance. The other demographic variables that were analyzed in the linear regression models including age, gender, education level, income level, and S-TOFHLA score were not found to be significant within their respective models.

Discussion

Similar to other studies, we found that higher educational attainment was associated with lower habitual SSB consumption (kcal) and that an increase in average daily beverage energy was linked to lower income level.[12,18] Specifically, data from one investigation found mean habitual sugar-sweetened beverage consumption (kcal) to be 277 for those with some high school, 208 for those with a high school diploma, 171 for those with some college, 160 for those with an associate's or bachelor's degree, and 87 for those with more than a bachelor's degree.[12 14] These findings mirror our reported mean habitual sugar-sweetened beverage consumption (kcal) of 354 for those who did not graduate from high school, 372 for those who graduated from high school, 349 for those with some college or a two year college degree, 180 for those with a four year college degree, and 120 for those with more than a four year college degree. Although our mean consumptions are higher, both investigations follow the same general pattern of decreased consumption with increased education. These associations could be due to the fact that energy-dense foods tend to be less expensive than nutrient-dense foods and therefore are consumed at a higher level in those at lower income levels.[19] Our findings regarding race are consistent with previously conducted studies in which American Indian women reported frequent soda and SSB consumption.[20] With regard to age and gender, previous investigations have reported an inverse relationship between age and SSB consumption and a higher consumption of SSB in men than women. Our sample found men consumed approximately 448 sugar-sweetened beverage calories per day while women consumed 259 sugar-sweetened beverage calories. Data from another study found men to consume 302 calories from sugar-sweetened beverages and women to consume 158 calories from sugar-sweetened beverages daily.[12]

Although health literacy has been linked to various poor health outcomes,[3] only one study has evaluated the relationship between health literacy and SSB.[12] The authors reported higher sugar-sweetened beverage consumption (kcal) in those with lower health literacy compared to those with higher health literacy which is similar to our findings. Lastly, the lowest consumptions were seen in the adequate health literacy, groups in both investigations.

While this sample varies in race, education, and income, there is little variation among health literacy scores. This could be due to the difficulty associated with recruiting low-literate populations for research studies. The small number of participants who fell in the low health literacy category illustrates that this study may not be representative of the low health literacy population as a whole.

The regression analyses demonstrate that the multiple significant

demographic predictors such as BMI, S-TOFHLA score, gender, age, education level, income level, and race category used to determine water, SSB, and total beverage consumption were able to account for some variability in these beverage outcomes. This suggests that being able to determine what factors influence an individual's beverage choices may allow for interventions and public health messages to be more tailored. Addressing multiple factors when looking at increasing healthy beverage consumption patterns may improve the chance of creating a successful intervention.

Due to the recent trends in increased weight status and SSB consumption it is necessary to develop successful interventions based on the factors which influence caloric beverage consumption. Reports of high added sugar consumption from the American Heart Association, Office of the Surgeon General, and the Dietary Guidelines committee illustrate the need for Americans to change their dietary habits in order to avoid negative health outcomes. Although we were unable to find demographic variables from our sample that were significantly associated with milk consumption, which warrants more research, we were able to determine significant predictors for the other beverage categories. Specifically, those with increased income tended to consume more water and less sugar-sweetened beverages, leading to a lower overall total beverage kilocalorie (energy) consumption. Also, individuals with higher educational attainment tended to consume more water and had lower total beverage kilocalorie consumption. Blacks consumed more total beverage kilocalories than whites and other races and less water than whites and American Indian/ Native Alaskans. Findings from this analysis suggest that some sub-groups may be prone to higher SSB consumption.

References

1. Kutner M, Greenberg E, Jin Y, Paulsen C. *The health literacy of America's adults: results from the 2003 national assessment of adult literacy (NCES 2006-483)*: U.S. Department of Education.;2006.
2. Baker DW. The meaning and the measure of health literacy. *J Gen Int Med.* 2006;21:878-873.
3. United States Department of Health and Human Services. Quick Guide to Health Literacy Fact Sheet. http://www.health.gov/communication/literacy/quickguide/factsbasic.htm. Accessed December 19, 2010.
4. Centers for Disease Control and Prevention. Health Literacy: Accurate, Accessible and Actionable Health Information for All. 2011; www.cdc.gov/healthliteracy. Accessed April 17, 2011.
5. United States Department of Health and Human Services. National Action Plan to Improve Health Literacy. 2010; www.dhhs.gov/communication/HLActionPlan/. Accessed April 17, 2011.
6. Institutes of Medicine Committee on Health Literacy. Health Literacy: A Prescription to End Confusion. 2004; www.iom.edu/Reports/2004/Health-Literacy-A-Prescription-To-End-Confusion.aspx. Accessed April 17, 2011.
7. National Institutes of Health. Clear Communication: An NIH Health Literacy Initiative. 2011; www.nih.gov/clearcommunication/healthliteracy.htm. Accessed April 17, 2011.
8. Healthy People 2020. Health Communication and Health Information Technology. http://www.healthypeople.gov/2020/topicsobjectives2020/objectiveslist.aspx?topicid=18. Accessed December 19, 2010.
9. Duffey KJ, Popkin BM. Shifts in patterns and consumption of beverages between 1965 and 2002. *Obesity (Silver Spring).* Nov 2007;15(11):2739-2747.
10. Bleich SN, Wang YC, Wang Y, Gortmaker SL. Increasing consumption of sugar-sweetened beverages among US adults: 1988-1994 to 1999-2004. *Am J Clin Nutr.* Jan 2009;89(1):372-381.
11. Rehm CD, Matte TD, Van Wye G, Young C, Frieden TR. Demographic and behavioral factors associated with daily sugar-sweetened soda consumption in New York City adults. *J Urban Health.* May 2008;85(3): 375-385.
12. Zoellner JM, You W, Connell C, Smith-Ray RL, Allen K, Tucker KL, Davy BM, Estabrooks PA. Health literacy is associated with healthy eating index scores and sugar-sweetened beverage intake: findings from the rural lower Mississippi Delta. *J Am Diet Assoc.* 2011;111:1012-1020.
13. Weiss BD, Mays MZ, Martz W, Castro KM, DeWalt DA, Pignone MP, Mockbee J, Hale FA. Quick assessment of literacy in primary care: the newest vital sign. *Ann Fam Med.* Nov-Dec 2005;3(6):514-522.
14. Hedrick VE, Comber DL, Estabrooks PA, Savla J, Davy BM. The beverage intake questionnaire: determining initial validity and reliability. *J Am Diet Assoc.* Aug 2010;110(8):1227-1232.
15. Baker DW, Williams MV, Parker RM, Gazmararian JA, Nurss J. Development of a brief test to measure functional health literacy. *Patient Educ Couns.* Sep 1999;38(1):33-42.
16. Kandula NR, Nsiah-Kumi PA, Makoul G, Sager J, Zei CP, Glass S, Stephens Q, Baker DW. The relationship between health literacy and knowledge improvement after a multimedia type 2 diabetes education program. *Patient Educ Couns.* Jun 2009;75(3):321-327.
17. Gazmararian JA, Baker DW, Williams MV, Parker RM, Scott TL, Green DC, Fehrenbach SN, Ren J, Koplan JP. Health literacy among Medicare enrollees in a managed care organization. *JAMA.* Feb 10 1999;281(6):545-551.
18. Thompson FE, McNeel TS, Dowling EC, Midthune D, Morrissette M, Zeruto CA. Interrelationships of added sugars intake, socioeconomic status, and race/ethnicity in adults in the United States: National Health Interview Survey, 2005. *J Am Diet Assoc.* Aug 2009;109(8):1376-1383.
19. Drewnowski A. The real contribution of added sugars and fats to obesity. *Epidemiol Rev.* 2007;29:160-171.
20. Harnack L, Sherwood N, Story M. Diet and physical activity patterns of urban American Indian women. *Am J Health Promot.* Mar-Apr 1999;13(4):233-236, iii.

From the Chair

2011-2012 Chair

James Swain, PhD, RD, LD

Dear Research DPG Members,

Hope this message finds you well.

I'm looking forward to another exciting year of Research DPG activities and am delighted to work for you as the 2011-12 Chair.

Efforts are ongoing in our continuing search for RDPG sponsorship for FNCE events, interactive webinars, member seed/pilot grants, and a variety of other activities. We are in the process of discussing some very exciting opportunities with a set of prospective sponsors. I look forward to updating membership as details are finalized. If you or a colleague would like to assist, please let us know.

This past September, our FNCE Member Breakfast was another success. As always, it was a great opportunity to reconnect with RDPG members, learn about current and upcoming events, and hear an excellent presentation, along with a delicious/nutritious breakfast menu. This year's presentation was given by Dr. Mark B. Cope, Nutrition Research Scientist, on the topic of White Hat Bias as relating to interpretation of research findings. Feedback shows it was very well received and that the topic is of keen interest to members. I would also like to take this time/space to express, on behalf of the Research DPG, our deep appreciation to Michelle Braun and Solae, LLC - sponsor of our FNCE 2011 Member Breakfast, and also for sponsoring a member research grant. Without continued support, the full range of Research DPG activities would not be possible.

I am looking forward to seeing you once more, if not before, at FNCE 2012 and our next Research DPG Member Breakfast and General Meeting. The Research DPG executive committee and I are already working to plan next year's exciting events. If you are interested in becoming more involved, please don't hesitate to contact us.

Sincerely & best regards,

James

Continuing Professional Education (CPE)

Kathryn S. Keim, PhD, RD, LDN

The role of Continuing Professional Education (CPE) Coordinator for The Digest is a new role for me. I started this position in November 2010. It has been exciting and challenging. So, let me tell you all of the steps for continuing education in an ADA publication.

First, Melanie Mott, our great Chief Editor, does the initial searching and finding of an author to write the continuing education article. This is typically done at least 6 months or longer before the targeted dateline for the newsletter publication. At the same time, I seek out experts in the topic to be content reviewers for the article and request curriculum vitae from them. I locate another person who has been approved by the Commission on Dietetic Registration to write test questions for CPE. Because there are so few people who are approved to write CPE questions we are trying something new this year. Currently, we have two DPG members (Ines Anchondo and Patti Landers) who can approve the questions created by the content reviewers. But since we don't want to overwhelm them and they are not experts for every single topic we are asking each content reviewer (remember, there are three for each article) to each write four to five questions about the article they are reviewing. Then, we ask the approved CPE question writers to review and approve these questions written by the reviewers. We know there probably are more RDPG members who are trained to write CPE questions, so if you have this expertise, please contact Melanie Mott or me (*kathy_keim@rush.edu*) know.

The second step starts once the main article is submitted to Melanie, RDPG CPE Coordinator. I then send the article to the content reviewers; they make comments for changes, fill out the ADA review form, provide tentative CPE questions, and forward all to me. Next, I review and send it to Melanie, RDPG CPE Coordinator. Melanie sends back to the author if the content reviewers want changes or have made comments in the document that the author needs to address. This can happen a few times until all are satisfied; the author, reviewers, and editors.

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History of Botanical Use as Medicinals

Jody L Vogelzang, PhD, RD, LD, FADA, CHES

Introduction

Botanicals have been important for human survival since the beginning of time and even in the 21st century they continue to be used for a variety of reasons.[1] Plants have served as a source of food, medicine, and a part of religious or spiritual ceremonies since the emergence of the human species. In the first century, Dioscorides, a Greek physician, began observing and writing about the medicinal benefits of botanicals. He is credited with writing the first manual describing the medical properties of plants. Dioscorides's writing served as the guide for pharmacology, medicine and herbal care until the 16th century.[2]

Today, one-half a millennium later, botanicals continue to be of interest. A report from the National Health and Nutrition Examination Survey (NHANES, 2003-2006) showed that about 20% of Americans used a supplement containing at least one botanical agent.[1] According to the World Health Organization (WHO) this number is much higher worldwide. They estimate that about 75% of people rely on botanicals for health reasons.[3]

Western health care providers may view botanicals used for medical purposes with skepticism. Lack of chemical and biological standardization and anecdotal proclamations of efficacy deter the integration of botanicals into a disease treatment regime.[4, 5] This article will examine past botanical practices and attempt to address why health care providers may be slow in returning to traditional herbal treatments.

Ethnobotany

Ethnobotany is the "scientific study of plant lore and agricultural customs of people".[3] Ethnobotany does not only function on the medicinal plants but also on other natural products derived from plants such as poisons, foods, and coloring agents.[4] Medicinal plant research is frequently based on ethnobotanical information. Using the knowledge of indigenous societies had led to current testing which attempts to quantify the medical effects and go beyond the observational data that has supported the use of the ethnopharmacopeia for centuries.[4]

In the first century Dioscorides, a practicing physician, gained knowledge of plant therapy by talking with local people regarding their use of botanicals. He then used the plants in practice and recorded their effect. Dioscorides's writings went largely unchallenged until the refinement of medical education in the 16th century. During the age of enlightenment, medical knowledge increased and resulted in the splintering of plant therapy into three separate groups: botany, pharmacology and medicine.[2] The separation of botany from "real" medicine may have lead to the chasm that continues to this day. When present day medical education does not include the didactic study of ethnobotany as an integral part of treatment, then it leads to the belief that it is unimportant or non-essential to their medical practice. Therefore, the knowledge and practice of traditional plant treatments remain outside the traditional medical community. Since the practice of herbal medicine rests primarily with the lay person, it is downgraded from science to folk lore.

With physicians untrained and unable to be reservoirs of knowledge regarding plant therapy, where would one turn for information? The answer to this question lies with the indigenous populations who continue to use plants in their practice.[5] Unfortunately, locating an indigenous ethnobotanist is not easy. As economic conditions have improved throughout the world and access to western markets increased, the uses of plants as medicinal agents have decreased. Western drugs, creams, and inoculations have replaced traditional plant applications. More affluent societies have attempted to provide upgraded healthcare to even the most remote places, resulting in the indigenous healer being side-line by the western-trained health professional. And indigenous healers today who still practice their craft are finding a much different customer than their predecessors. Ironically, today the most ardent customer of botanical advice and treatment is not another villager but instead scientists working for major drug companies.[4, 5] Pharmaceutical companies have sent their brightest and best to a host of countries searching for samples of plant materials to expand their therapeutic drug offerings.

As late as the 1950's, almost 80% of prescription drugs were derived from botanicals.[3] In the 1960s and 1970s, however, that percentage decreased as synthetic drugs became more common due to advances in biochemical techniques. Today, only about 25%

of prescription drugs manufactured in America are still plant based. Common prescription medications such as atropine, digitalis, quinine, and taxol all have botanical sources. Interestingly, the prescription medications listed above are ones that cannot be replicated through synthetic biochemical techniques.[3]

Licensed health professionals do not appear to have problems with the prescription and use of the United States Food and Drug Administration (FDA) approved botanicals but do have reservations regarding those available without a prescription. Non-prescription, over-the-counter-plant products can provide inconsistent and even dangerous results. NHANES suggests that over 6 million Americans use botanical products in some form such as an infusion into hot water making a tea- like beverage, a cream or topical ointment, or a tablet or capsule.[1, 3]

There are several common problems cited in the use of botanicals. These include side-effects, drug interactions, and lack of consistency in dosage.[3] Botanicals are natural products, meaning that by design they are products of light, rainfall, and soil content. A variation in any of these essential elements can alter the active ingredients, thus changing their efficacy. Modern laboratories are equipped to analyze the biological activity of each batch of botanicals prior to point of sale. Microchip based polymerase chain reaction (PCR) is able to provide a quick, inexpensive and accurate assessment of active ingredients.[3] However, even when biochemists are able to quantify the actual amount of the active ingredients in a batch, the reality is that the next batch from a different plant or area may not be the same - meaning that the dose may need to be altered based on the percentage of the active ingredient.

Governmental Interest in Botanicals as Medicinal Treatments

While accurate dosing provides a multitude of problems for the health care provider, as well as the patient, dosing is essential when evaluating the safety of the botanical. In other words, before the status of botanicals can be revived as a routine intervention for medical problems, medical professionals need to be assured of a consistent product. Moreover, in vitro and in-vivo studies are needed to verify the safety and toxicity of all plants used for medicinal treatments.

Help in addressing the safety and efficacy of botanicals occurred two decades ago through the passing of a legislative bill which allocated funds to set up an office in The National Institute of Health (NIH). This office was charged with investigating "promising unconventional medical practices".[6] In 1999, NIH created the National Center for Complementary and Alternative Medicine (NCCAM). This center funds rigorous research on many complimentary medical treatments including plant based medicinals. Current studies involving botanicals include clinical trials of saw palmetto and African plum (Pygeum) for benign prostatic hypertrophy, and clinical studies of silymarin for chronic liver disease.[6] In August of 2010, NIH announced the availability of 8.1 million dollars in grant funds to study the potential mechanisms of action of promising plant products. The goal of this funding is to explore the plants "active components, their molecular and cellular targets, as well as markers of potential beneficial or harmful biological effects".[6]

Preservation of Traditional Medicine Involving Botanicals

In order to preserve traditional knowledge of botanicals for future application and use, the holders of this knowledge must be acknowledged. The most fertile areas for medicinal botanicals include the rainforests and other isolated areas, including mountainous and desert regions throughout the world. Again, changing economic pressures impact this need. As many of the natural havens for botanicals become better known, ecotourists have begun to flock to these areas to enjoy and investigate their natural beauty. In order to accommodate the lucrative tourist trade, indigenous young and middle aged people have turned to employment based on the demands of the tourism market sector. Instead of herding sheep, digging diamonds, and practicing herbal medicine like their fathers, grandfathers and grandmothers, they now guide, ferry, and cook for the tourists. There is little motivation to learn about traditional plants when they are engaged in the lucrative tourism market even though the visitors may well have been drawn to the area initially because of the reputation of the natural environment.[7]

An interesting study by Voeks in Northeast Brazil found that the handing down of knowledge on the medical benefits of the plants was almost nonexistent. Instead of

passing on verbal knowledge of local plants and their medicinal effects to their children, the indigenous healers had a new crowd clambering for information. These were not family members interested in the practice of botanical medicine but instead were trail guides wanting to include a few facts into their canned dialogue, or outsiders pursuing an "alternate lifestyle". Failure to acknowledge the wisdom and experience of the older healers will lead to a knowledge void of plant-based medicine in future generations.[4, 7]

My own field experiences in the Baja California Peninsula in México are very similar to Voeks in Brazil. With encouragement from academic "out-siders", a very old family ranch is being resurrected as a training ground for biologists. One member of the original family is now pursuing his dream of continuing the work of his matriarchal relatives as an herbalist and healer. During my time in Baja California I was able to see firsthand the pride and knowledge he had in sharing not only his entrepreneurial dream of a desert spa but also the knowledge that was his birthright. It is interesting to note that it was not other family members, the community, or the government who served as the impetus for the revived interest in botanical medicine. Instead, American University faculty and students recognized the importance of his dream, thus serving as the spark to rekindle a "market" for his knowledge and passion.

Conclusion

Science driven validation of the medical plant bioactivity will drive economic development, but it should also ensure that biological resources are conserved. Medicinal plants continue to be critically important in poorer populations that cannot afford other health care options.[4, 8] However, indigenous botanicals should not be depicted as "poor-mans' medicine but instead a viable and universal co-partner in good health. While scientists sort through validation studies of active ingredients found in botanicals, the environment should remain supportive of traditional and cultural practices that surround botanical use.

References

1. Bailey RL, Gahche JJ, Lentino CV, Dwyer JT, Engel JS, Thomas PR, Betz JM, Sempos C, T Picciano MF. Dietary supplement use in the United States. *Journal of Nutrition.* 2011; 141: 261-266.
2. Rhizopoulou S, Katsarou A. The plant material of medicine. *Advances in Natural and Applied Sciences*. 2008; 2: 94-98.
3. Ansari J,A Inamdar NN. The promise of traditional medicines. *International Journal of Pharmacology*. 2010; 6: 808-812.
4. Heinrich M. Ethnobotany and natural products: The search for new molecules, new treatments of old diseases or a better understanding of indigenous cultures? *Current Topics in Medicinal Chemistry.* 2003; 3: 141-154.
5. Idu M. Current trends in ethnobotany. *Tropical Journal of Pharmaceutical Research.* 2009; 8: 295-296.
6. National Center for Complementary and Alternative Medicine. Http://www. nccam.nih.gov. Accessed March 16, 2011.
7. Voeks RA. Are women reservoirs of traditional plant knowledge? Gender, Ethnobotany and globalization in northeast Brazil. *Singapore Journal of Tropical Geography.* 2007; 28: 7-20.
8. Barrows LR, Matainaho TK, Ireland CM, Carter GT, Bugni T, Rai P, Gideon O, Manoka B, Piskaut P, Banka R, Kiapranis R, Noro JN, Pond CD, Andjelic CD, Koch M, Harper MK, Powan AR, Jensen JB. Making the most of Papua New Guinea's biodiversity: Establishment of an integrated set of programs that link botanical survey with pharmacological assessment in the land of the unexpected". *Pharmaceutical Biology.* 2009; 47:795-808.

CPE

continued from page 6

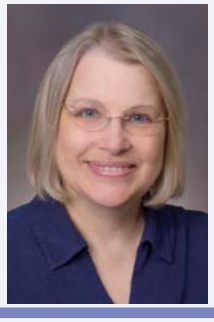
The third step involves sending all these documents, (the article, review forms and potential CPE questions) to the approved CPE question writer. This person reviews and approves all the documents. Then I receive all the documents back. I complete the final packet to send to the temporary ADA liaison the RDPG Chief Editor. This packet includes the ADA form that the CPE coordinator completes, ADA reviewers' forms, the main article, CPE questions, and curriculum vitae for content reviewers and author.

Being involved in this process as an author or content reviewer is rewarding and much appreciated by the membership. The CPE articles are great benefits of membership in this practice group.

Past Chair Report

RDPG

Martha McMurry, MS, RD, LD



The RDPG had a busy and productive year in the last year, thanks to the officers and volunteers who worked so hard on our group's activities. I send a special thanks to these RDPG members:

- Kathleen Woolf, PhD, RD, Secretary, who, with her humor and attention to detail, faithfully maintained our electronic mailing list and also kept me on track of RDPG business
- James Swain, PhD, RD, Chair-elect, who cheerfully accepted the duties of his office and tackled the ins and outs of DPG guidelines and deadlines that quickly came his way as he assumed the Chair duties in June
- Alanna Moshfegh, MS, RD, Treasurer, who learned the duties and procedures of her office in record time
- Teresa Fung, ScD, RD Nominating Committee Chair, who, with her Nominating Committee members Joanna Lampe, PhD, RD, Mara Vitolins, DrPH, RD, and Catherine Champagne, PhD, RD, found candidates for all open RDPG positions
- Melanie Mott, MS, RD, Ines Anchondo, DrPH, RD, Kim Stote PhD, RD and Kathy Keim, PhD, RD, Editorial Team, who worked diligently and against continuous deadlines to make The Digest one of the best DPG newsletters published
- Ingrid Adams, Membership Chair, who helped the RDPG membership increase by nearly 50% in the past couple of years
- Emily Tarleton, Coordinator of the RDPG Clinical and Translational Science Sub-Unit, who fostered a productive relationship among RDPG members at CTSAs around the nation
- Jeanene Fogli, Past Chair, who has, for the second year, gone beyond the scope of her official duties and has led the selection of member awards.

My sincere thank you to all of the members who have been so dedicated to the RDPG. This is the reason I love being involved with the RDPG – getting to know the talented, diverse, and remarkable members of our group.

The RDPG will start having our own delegate to the ADA House of Delegates next year. Our first RDPG Delegate will be appointed by the Chair with approval by the RDPG Executive Committee, and will take office in the 2012-13 term. If you would like to suggest a member to be considered for this position, please contact Chair James Swain at james.swain@case.edu.

Qualifications for this position include:

- ADA member in the Active classification
- Demonstrated ability to network and communicate with one's peers and colleagues
- Demonstrated leadership in professional issues of the Association
- Demonstrated ability to represent members's issues
- Expertise in research practice.

Functions of the RDPG Delegate are to:

- Serve as a member of the House of Delegates (HOD) and attend HOD meetings (requires a time commitment of approximately ten (10) days each year for meetings and travel.
- Participate in HOD activities to identify and prioritize trends in the profession.
- Participate in HOD and ADA Board of Director committees and task forces as assigned.
- Perform functions, as needed, to assist in facilitating the work of the House.
- Network and reflect the issues in research dietetic practice.
- Serve as a technical expert on research dietetic practice.
- Identify and propose to the HOD initiatives in area of practice represented.
- Perform other duties as may be assigned by the Speaker.
- Encourage and promote diversity and inclusivity.
- Attend RDPG Executive Committee meetings when available as a non-voting member and submit report of activities.
- Perform, as available, other duties as specified in a current job description or as designated by the Executive Committee.

It has been great at working with such a super DPG, and I look forward to new responsibilities as Past RDPG Chair in the coming year.

Martha

Member Spotlight

Helen Rasmussen PhD, RD, LDN, FADA

Erin Gaffney-Stomberg, PhD, RD

Helen Rasmussen, PhD, RD, LDN, FADA is a Senior Research Dietitian in the Metabolic Research Unit at the Jean Mayer USDA Human Nutrition Research Center on Aging (HNRCA) at Tufts University in Boston, MA. Her commitment to education and research compelled her to return to graduate school later in her career to obtain a doctorate in Educational Studies. The skills she gained in her doctoral work proved to be invaluable in her current position at the HNRCA. Read on to learn all about her interesting career and the path she took to get where she is today.

Could you describe your current position for us?

As a Senior Research Dietitian in the Metabolic Research Unit at the HNRCA, I am primarily responsible for all dietary aspects of human feeding studies. Our center's mission and focus is to determine nutritional requirements during the aging process. Elderly and young subjects who volunteer for these studies have to consume concoctions and potions designed to answer the question of how food and nutrition affect how we age. I am also an Instructor at the Friedman School of Nutrition and Science Policy, and work with the Frances Stern dietetic interns as part of their exposure to research.

What is your education background?

I completed my undergraduate work in Food and Nutrition at the University of Nevada-Reno, where for 4 years I also had a job as a teaching assistant, grading Nutrition 101 exams, setting up the experimental food labs experiments, and buying food for the Food Culture class. I have a vivid memory of one student's presentation on food culture in nomadic tribes. I helped construct a tent and the class sampled a delicious stone-ground maize dish, surrounded by livestock (actually 3 baby chickens in a tiny cage) borrowed from a ranch supply center. The other memory from this job was helping a student dig a pit in the back of the school for a pig roast as part of her project on ceremonial feasts for South Sea island cultures.

I went on to get a Master's in Food and Nutrition from Arizona State University. I next relocated to Boston, got my RD and worked as the Research Dietitian in the Metabolic Research Unit at University Hospital. I then took a position with the Peripheral Vascular Department, where I managed the vascular testing research. This wasn't a departure from dietetic research, as one of the main studies was on hyperlipidemia and vascular complications. I decided to learn all that I could in research: I took all vital signs, drew blood, started intravenous lines, and gave injections. I used physics, trigonometry, and calculus in blood flow testing, endocrinology, cardiovascular physiology, and psychology. The work I did there answered the question, which I had posed in my freshman and sophomore years of college: "When and how will I ever have to use this stuff?". Most importantly, for my own learning odyssey, I took away a new sense of professionalism, ethics, a broader knowledge base, and a reverential respect for patients.

Once the HNRCA opened in the 1980's, I took a position as senior research dietitian, the position I currently hold. I also had two children, and when they were old enough to let me work on my own homework, I returned to school for my PhD, which I received in 2008 in Educational Studies at Lesley University in Cambridge, MA. I had been accepted into the Tufts Nutrition doctoral program, but put it on hold while my kids were still small, and it was the best decision I've ever made. In my doctoral research, I had to step outside my narrow nutrition niche world to pursue how to make nutrition relevant to others. My research provided me a bigger picture of how nutrition fit into health, and how health fit into an individual's sense of well-being. My dissertation turned out to be the big picture: "Social Capital, Social Networks and Well-Being in a Longitudinal Cohort of Elderly Men and Women: A Mixed Methods Study."

Please summarize the focus your current research and describe how you became involved/interested in your current line of research?

I currently enjoy very dynamic collaborations with nutrition scientists at the HNRCA, including feeding studies involving bone health, carotenoid research, and flavonoid/phytochemical clinical trials. During my work with subjects at the HNRCA I became very interested in learning more about how to better understand how subjects live their daily lives. This past summer I presented a piece of my doctoral research on photo elicitation, one of the qualitative pieces of my dissertation, at the "Communications, Medicine and

Ethics" international conference. Photo elicitation is a research tool I developed as part of my doctoral work. I asked subjects to take pictures of their daily lives. The photos then served as conversation starters to help understand what the subjects do each day and perhaps more importantly, the photos helped the volunteers to trust me more.

What are your career goals?

My current goal is to expand upon my doctoral research, in particular, one finding of my doctoral research was that the subjects scored very high in social capital. This Boston-based elderly cohort is very sophisticated in the area of research, so I have started to look at rural elders. I am in the early stages of duplicating the survey with the Olympic Area on Aging in Washington State. I have started to receive data from some of the rural participants.

What advice would you give to a young researcher for developing a successful line of research?

Although not absolutely necessary, exposure to clinical settings will give an aspiring researcher the best preparation for nutrition research. New graduates may not want to work in hospital-based settings. However, understanding what can and does go awry in complex chronic diseases will give one an appreciation for how the body utilizes nutrients. Nurture your intellectual curiosity; sign up for conferences; keep a log of your ideas for possible research areas. Network both in the field and out; use Google to find those who are also interested in similar lines of thinking. Find a mentor. Volunteer (read: for no pay) to work on projects.

How has your affiliation with ADA impacted your career progression?

My affiliation with ADA has been invaluable, especially at the state and local level. When I think of the organization I view ADA as a fantastic way of keeping our professional network together. ADA has many faces, and they are all of my terrific mentors, colleagues and friends.

If someone were to ask you to explain, "why research is important to the field of dietetics" what would you say?

It is a professional responsibility, as shown by the adoption of evidence-based reviews of research as the sine qua non of clinical practice to conduct and use research in education and practice settings. The field of Nutrition and Food policy is becoming the new favorite field of study; we need to capture data to document our worth to our employers and policymakers, and to further validate our skills and expertise in newly found arenas. Research is imperative to this goal.

Elected RDPG Officers for 2011-12

The officers elected last spring for the current year are

Chair-elect
Christopher Taylor, PhD, RD
Associate Professor, Medical Dietetics
The Ohio State University

Secretary
Marilyn Briggs, RD, PhD
Co-Director, Center for Nutrition in Schools
UC Davis

Nominating Committee Member
Joan Milton, MS, RD
Research Coordinator
Providence Medical Research Center,
Spokane WA

We want to thank Janet Roseland, MS, RD and M Ruth Williams, EdD, MS, RD for participating in this election. The RDPG is honored to have talented members willing to take leadership positions in our group.

Nuts and Bolts

Logistic Regression

Inés M. Anchondo, DrPH, RD, LD, CSP, MPH

Logistic regression (LG) is an approach to prediction, part of the statistical models called generalized linear models. It is a method for determining the relationship between the dependent variable and the independent variables. The dependent variable in LG is usually* dichotomus or categorical, which is a variable that has the value of 'yes' and 'no' or 1 or 0 (presence or absence), as it is customary to code this variable. Logistic regression is similar to ordinary linear regression methods such as: ANOVA, simple linear regression, ANCOVA, etc.

LG predicts the probability that Y is equal to 1 (rather than 0) given certain values of X. Assuming that X and Y have a positive linear association then, LG predicts the probability that Y = 1 will increase as the values of X increase.

In logistic regression results are given in terms of *odds ratio* (OR), a coefficient. If the OR is greater than 1 then the event is more likely to happen, than not. If the OR is less than 1 then the event is less likely to happen, than not.[1] Being that 1 is the null value for OR any value near 1 (say, 0.9 or 1.1) may indicate a weak association (assuming p-value is 0.05 or less and no confounding or bias exists).

For example, in the article 'Rapid Postnatal Weight Gain and Visceral Adiposity in Adulthood: The Fels Longitudinal Study'[2] results included in Table 3.

The OR for infants who experienced rapid infant weight gain was 2.27, which means that the probability that Y equals 1 is twice a likely (2.27 times to be exact) as the value of X is increased by one unit. The OR for infants in the 'gradual' weight gain was 1.35 (adjusted for three variables). In this case, Y represents increase (yes or no) in weight of 0.67 standard deviation score (SDS). The X is the amount of visceral and abdominal fat accumulation. In addition, these models were 'minimally' adjusted for three variables and 'fully' adjusted for twelve variables. This refers to the other variables that were taken into consideration in the results. The interpretation of these results is that infants who experienced rapid weight gain had a higher OR than infants with 'gradual' weight gain.

*LG can also be used with ordinal data, variables with two or more categories such it is done in surveys.

References

1. Crichton N. INFORMATION POINT: Odd ratio. *Journal of Clinical Nursing.* 2001;10(2):268-269.
2. Demerath EW, Reed D, Choh AC, et al. Rapid Postnatal Weight Gain and Visceral Adiposity in Adulthood: The Fels Longitudinal Study. *Obesity.* 2009;17(11):2060-2066.

Table 3

Rapid infant weight gain and the risk of overweight and obesity in adulthood, N = 233

	Overweight (BMI >25kg/m^2)		Obesity (BMI>30kg/m^2)	
	OR[a] (minimally adjusted)	OR[b] (fully adjusted)	OR[a] (minimally adjusted)	OR[b] (fully adjusted)
Rapid infant weight gain (change in SDS greater than +0.67)	2.27 (1.04, 4.94)	5.54 (1.88, 16.31)	2.41 (1.09, 5.37)	4.08 (1.44, 11.6)
Gradual infant weight gain (change in SDS -0.67 to +0.67)	1.35 (0.70, 2.58)	2.37 (1.04, 5.42)	0.82 (0.39, 1.76)	1.07 (0.45, 2.58)
Slow infant weight gain (change in SDS less than -0.67)	(ref)	(ref)	(ref)	(ref)

OR, odds ratio; MRI, magnetic resonance imaging; SDS, standard deviation score.
[a]Adjusted for sex, gestational age at birth, and age at MRI. [b]Adjusted for the above, and birth weight SDS, stature, birth year, birth order, breastfeeding (ever/never), education (university degree yes/no), sport activity (high/low), and current cigarette smoking status (yes/no).

FNCE 2011

Members enjoying breakfast, networking and RDPG news

Chair James Swain (standing) leading the Member Breakfast

Introduction of Annie Krysl, new ADA RDPG Contact

The 2011 Solae RDPG Pilot Grant Award to Ashley Vargas

Certificate of Appreciation to Martha McMurry, past RDPG Chair

Mark Cope, PhD, from the breakfast sponsor Solae presenting "White Hat Bias"

A big thank you to Solae™
the sponsor for our FNCE event.

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