

# Who Is Making Lifestyle Changes Due to Preventive Health Care Information? A 10 Year Comparison Study

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## Abstract

This paper sought to describe from a set of 6 demographic and 13 lifestyle change variables the person who is significantly and positively impacted by preventive health care information (PHCI). Based on past research, six hypotheses were developed. Three of the six hypotheses were accepted. In addition, there were significant relationships for each of the six demographic variables with at least one of the lifestyle change variables. Those who are seeking and are positively impacted by PHCI are better educated, female, and (depending upon the lifestyle change variable in question) fall into a definite age category. There is partial support that more PHCI-oriented persons are married and have higher income. The most important lifestyle changes emanating from PHCI were “changes in eating habits,” “having periodic physician checkups,” “utilizing nutritional labeling,” and “not smoking.” “Getting regular exercise,” “losing weight,” “consuming less alcohol,” “reducing stress” and “changing sleeping habits,” were associated with the utilization of PHC information, but to a lesser extent.

A comparison of the 2003 and 2013 surveys showed similar findings. The greatest difference was that “having a higher level of education” was a much better predictor of a PHCI orientation in the 2013 survey than the 2003 survey.

## Introduction

Preventive health care (PHC) refers to the awareness and efforts a person undertakes to enhance and preserve his physical, mental, and emotional health in the present and future. Preventive Health Care Information (PHCI) is becoming widely distributed as consumers and businesses are increasingly concerned about health-related issues and escalating health care costs. Consumers now are more actively involved in their personal health (Dutta-Bergman, 2005) rather relying solely on doctors' expertise (Cangelosi and Markham, 1994).

About three-fourths of preventable deaths are attributed to bad lifestyle habits formed at a young age. Of the preventable deaths, an estimated 30 to 40 percent are due to tobacco, and 30 to 35 percent are due to poor diet and lack of exercise. Both individuals and society pay for unhealthy lifestyles in terms of health care dollars. On a positive note the public's interest in nutrition and PHC methods has never been greater. Also laws have restricted tobacco use, such that proponents of PHC can focus more on diet, physical activity, and the promotion of generally healthy lifestyles (Mokdad, 2004).

PHCI can help businesses be more productive. Companies may encourage employees to participate in programs to change lifestyle and behavior such as healthier diets, physical exercise, and stress reduction. These types of preventive measures can contribute to reduction in medical and disability costs as well as reduction in absenteeism and turnover (Danna and Griffin, 1999).

The success of wellness or health promotion programs is due in part to the communication of their benefits to the potential consumer. Herein is the critical nature of PHCI effectiveness. The goals of PHCI are to increase awareness of health-related issues and to encourage application to benefit personal health. Consumers differ in seeking responsibility for their own health and well-being. The process of seeking PHCI or any type of health care information differs considerably from the process involved in other product and service industries in that the consumer gathers information about health-related issues important to him (Thomas, 2014).

PHCI is obtained through a variety of personal, commercial, noncommercial, institutional and media sources. Institutions such as shopping malls and supermarkets provide nutritional information and host health fairs (Glanz, Bader and Iyer, 2012). Personal sources include friends, family, neighbors, work associates and the like. Physicians and other health personnel provide more formal and authoritative PHCI. Media sources abound, such as print (magazines, newspapers and newsletters), electronic (radio and television), and the internet which is quickly replacing most traditional sources as the information of first resort (Thomas, 2014). This study examines and profiles those whose lifestyles have been changed by PHCI. It examines whether consumers were more or less PHCI-oriented in 2013 vs. 2003,

as described by their demographic characteristics. Specifically this study 1) compares results for 13 lifestyle variables in both the 2003 and 2013 surveys and 2) compares the analysis of demographic characteristics for the two surveys, noting similarities and differences of health care consumers that are more PHC-oriented.

## **Background Information and Exploratory Hypotheses**

The literature search produced information resulting in development of six hypotheses regarding demographic characteristics and their links to PHC. Because of the exploratory nature of the study, there is no attempt to provide an exhaustive treatment of the demographic or lifestyle change variables. While both samples are nationally representative, the external validity of the results is limited to only the variables measured in this study. The literature and hypotheses are presented in a sequential manner. One aspect of the evaluation of each hypothesis involves the relationship between the demographic variables and the PHCI, and is borrowed from an earlier work by Cangelosi and Markham (1994). This is described in more detail in the methodology section.

### Demographic Characteristics

**Educational Attainment:** Education is a predictor of health service and information usage, types of services utilized, and circumstances of the usage (Thomas, 2014). Those with higher educational attainment are more likely to have participated in fitness activities (Doyle, 1989). Research by the National Center for Health Statistics (2005) found that 25% of adults with advanced degrees engage in high levels of exercise compared to only 14% of adults with less than a high school diploma. Cangelosi and Markham (1994) found that those with higher levels of educational attainment are more informed and experience lifestyle changes. Also hospitalization rates, physician utilization, and dental utilization are higher among better educated persons even though they have a lower incidence of dental and health problems. Hence, better educated persons perceive various health care services as more beneficial (Thomas, 2014). They also seek PHC media alternatives (Cangelosi, Ranelli, and Kim, 2012), and are more likely to engage in PHCI-oriented activities (Cangelosi, Ranelli, and Voss, 2009), and more likely to acquire PHCI online (Cangelosi, Ranelli, and Kim, 2013). **H<sub>1</sub>:** Respondents with higher educational attainment will exhibit lifestyle characteristics that are more PHCI-oriented.

**Income:** Income is a predictor of health services and PHCI usage. Research suggests lower hospitalization rates for those with higher income. Conversely, emergency room use is greater among lower-income groups, especially for non-emergency conditions, usually because of a lack of health insurance coverage. Freestanding emergency clinics are less likely to be used by lower-income groups due to lack of awareness. Lower-income groups also tend to be infrequent users of physician services (Thomas, 2014). Persons with higher income were more likely to apply

nutritional label information (Nayga, 2000), and make greater use of PHCI, especially print media (Cangelosi, Ranelli, and Kim, 2012). However, with respect to the distribution of PHCI, income had no effect on PHCI orientation (Cangelosi, Ranelli, and Kim, 2010a). The results are somewhat mixed, but higher income is generally associated with greater PHCI usage. **H<sub>2</sub>:** Respondents with higher incomes will exhibit lifestyle characteristics that are more PHCI oriented.

**Health Insurance:** Persons without health care insurance coverage are more likely to make inappropriate use of emergency room services and less likely to utilize PHCI (Ryan, Riley, Kang and Starfield, 2001). Those without health insurance for six months or more have much lower rates of PHC use than do persons with continuous health care coverage (Bednarek and Schone, 2003; Sudano and Baker, 2003). In a recent study dealing with various PHCI delivery systems, health care consumers with insurance were not necessarily more PHCI-oriented (Cangelosi, Ranelli, and Kim, 2010a). **H<sub>3</sub>:** Respondents with health insurance will exhibit lifestyle characteristics that are more PHCI-oriented.

**Gender:** Gender partially explains the use of PHCI. Verbrugge (1988) found that women were more often ill, yet outlive men by an average of seven to nine years. Women tend to have more short-term illness and non-fatal chronic conditions, whereas men have higher rates of fatal conditions. Women feel worse on average in part due to their psychological attitude about themselves. They feel less in control of their physical well-being than men. Hence, women seek help more often, which takes the form of more frequent use of PHC methods. Women use healthcare system more often than men (Thomas 2014). Several studies have found that women gather PHCI more from various face-to-face PHCI delivery systems (Cangelosi, Ranelli, and Kim, 2010b) and make greater use of media and other impersonal sources of PHCI (Cangelosi, Ranelli, and Kim, 2010a). **H<sub>4</sub>:** Women will exhibit lifestyle characteristics more PHCI-oriented than men.

**Age:** Since age is arguably the single most important predictor of the demand for health services, the changing age distribution trend has huge implications for healthcare marketers. One example is the evolution of the pro-active, modern health care consumer. They are younger, less likely to have a family doctor, and comparison shop for hospital care when needed. These individuals are oriented toward wellness. They consider prevention and education as important as treatment and cure. This modern health care consumer is younger and takes responsibility for his own health and well-being, especially in acquiring PHCI electronically (Cangelosi, Ranelli, and Kim, 2012). Unlike younger health consumers, older consumers are affected more by PHCI (Cangelosi, Ranelli, and Markham, 2009). These results are mixed and we expect following hypothesis.

**H<sub>5</sub>:** Older respondents will exhibit lifestyle characteristics more PHCI-oriented.

**Marital Status:** Being married has long been recognized as a key to longevity (Manzoli et al., 2007). Married people tend to be healthier, thus requiring less health care services. Being married and greater PHCI usage are positively related, likely due to greater knowledge concerning its importance. Married people are more likely to carry insurance and to utilize healthcare services (Cangelosi and Markham, 1994; Cangelosi, Ranelli, and Kim, 2010b; Cangelosi, Ranelli, and Kim, 2012). People whose marital statuses differ (i.e., divorced, widowed, single) tend to exhibit negative health indicators such as higher illness, drinking, and stress levels, and less propensity to exercise (Thomas, 2014; Wilson and Schoeborn, 1989). **H<sub>6</sub>:** Married respondents will have a greater PHCI orientation than unmarried respondents (singles, divorcees, widows, partners, etc.)

## Methodology

For both surveys, the target population was the United States. The sample frames consisted of a 2 million member online consumer panel owned by an online database vendor. In 2003 and 2013, data collection involved the same three entities: the researcher, an online host for questionnaires, and the online consumer panel vendor, that leases email addresses to researchers for a specified amount per usable response. The questionnaire was posted by the online host, and the online database vendor downloaded the email addresses. The 2003 survey resulted in 550 usable responses, whereas the 2013 survey resulted in 404 usable responses. The 2003 survey had more responses because the demographics of the initial 400 did not meet the demographics of a national sample. The online database vendor continued the data collection process until the sample produced demographics that closely conformed to the demographics of a true national sample, which resulted in 550 usable responses. The 2013 survey achieved national representation with 404 responses.

National online panels use pre-recruited respondents who provide demographic information in an initial survey, so that their participation in subsequent surveys considers only questions pertaining to a particular project (Luth Research, 2007). Some researchers contend that online panels lack the size that provides a truly representative sample frame (Dréze, 2002). Online panels will continue to increase in importance, and increased internet access and technology will continue to produce sample frames that are more representative (Smith, 2006; Harris Interactive, 2007). Concerning the comparison of the two databases, while this study does not meet the strict definition of longitudinal research, it can be argued that since both databases were nationally representative, that it is reasonable that they can be compared. Practically, trying to invoke a strict longitudinal study when the measurements were 10 years apart would be very difficult at best.

A comprehensive questionnaire dealing with many aspects of preventive healthcare was developed. This study looked at 13 lifestyle change variables, 3 variables dealing with the PHCI index, and 6 demographic variables.

People using external information sources will likely adopt behavior based on that information (Gatigono and Robertson, 1985). Similarly, persons utilizing PHCI are those most likely to practice PHC. The PHCI index in this study includes both the propensity to be knowledgeable and seek PHCI as well as the likelihood of using such information leading to a healthier lifestyle.

The PHCI Index consisted of three questions (see Cangelosi and Markham, 1994). The PHCI index measures 1) perceptions of how “informed” respondent is about PHCI methods; 2) degree to which respondent seeks out PHCI; and 3) extent to which PHCI has changed the respondent’s general lifestyle. The PHCI index score is the sum of the responses to the three questions, with lower scores referring to respondents who are more knowledgeable, and make greater effort to acquire and be impacted by PHCI (Cangelosi and Markham, 1994).

## Data Analysis

The six demographic variables to be analyzed include: age, gender, educational attainment, household income, having or not having health insurance, and marital status. Table 1 provides a demographic summary of the sample respondents in this survey.

**Table 1: Demographic Summary of Respondents**

Demographic Variable	Categories	2003 Survey	2013 Survey
Age Categories	19-35	24.50%	29.50%
	35-44	25.10%	19.30%
	45-64	25.10%	32.40%
	65+	25.30%	18.30%
Gender	Male	41.10%	51.50%
	Female	58.90%	48.50%
Ethnic Background	White	66.70%	67.10%
	Black	14.20%	11.90%
	Hispanic	15.30%	13.10%
	Other	3.80%	7.90%
Marital Status	Married	56.20%	37.70%
	Not Married	43.80%	62.30%
Educational Attainment	Less than College	64.70%	65.30%
	College or more	35.30%	34.70%
Income Categories	Less than \$25,000	18.50%	22.00%
	\$25,000-49,999	42.20%	28.70%
	\$50,000-74,999	20.40%	24.00%
	\$75,000 and over	18.90%	25.30%

The demographics of the 2003 and 2013 surveys are very similar, with the differences being attributable to the 10 year difference in the studies and sampling error. This is especially true for the educational attainment and income. Hence, to reiterate, this study compares two demographically comparable and representative databases.

Description of Lifestyle Changes Due to PHC Information and Demographics

Table 2 depicts the aggregate percentage of respondents who responded “generally agree” and “definitely agree” as to how much PHCI influenced each of the lifestyle changes. The scale measured the extent of agreement with the statement “Because of PHCI I have...” where 1=definitely agree, 2=generally agree, 3=slightly agree, 4=slightly disagree, 5=generally disagree, and 6=definitely disagree.

Table 2 reveals that four lifestyle change variables (smoking, nutritional labeling, periodic checkups with doctor, and changed eating habits) have the greatest impact for both 2003 and 2013 respondents. However, the mean values for these four variables are lower in the 2003 survey, as well as the PHCI index. Also, a higher percentage of respondents indicated greater degrees of agreement in 2003. Table 2 reveals basically 3 clusters of means: the top 4, middle 5, and lower 4. The extent of agreement that PHCI influenced lifestyle changes ranged from 59% to almost 67% in 2003 compared to 48% to 59% in 2013.

**Table 2: Percentage of Respondents with Generally/Definitely Agree Responses**

<b>Lifestyle Change Variables</b>	<b>2013 Database: Definitely or Generally Agree (%), Means in Parentheses</b>	<b>2003 Database: Definitely or Generally Agree (%), Means in Parentheses</b>
<b>Reduced or Quit Smoking</b>	<b>59.2% (2.54)</b>	<b>66.7% (2.31)</b>
<b>Made regular use of Nutritional Labeling</b>	<b>53.7% (2.59)</b>	<b>61.1% (2.41)</b>
<b>Scheduled Periodic Checkups</b>	<b>55.7% (2.60)</b>	<b>64.4% (2.34)</b>
<b>Changed my Eating Habits</b>	<b>2.61% (2.61)</b>	<b>58.9% (2.40)</b>
<b>Engaged in Regular Exercise</b>	<b>38.6% (3.05)</b>	<b>42.9% (2.94)</b>
<b>Lost Weight</b>	<b>32.7% (3.28)</b>	<b>37.6% (3.10)</b>
<b>Consumed Less Alcohol</b>	<b>34.2% (3.29)</b>	<b>44.9% (3.01)</b>
<b>Engaged in Stress Reduction Exercise</b>	<b>32.7% (3.32)</b>	<b>36.4% (3.13)</b>
<b>Changed my Sleeping Habits</b>	<b>30.2% (3.42)</b>	<b>29.3% (3.40)</b>
<b>Changed my Work Habits</b>	<b>23.8% (3.78)</b>	<b>27.6% (3.60)</b>
<b>Changed my Social Life</b>	<b>19.6% (3.87)</b>	<b>24.2% (3.64)</b>
<b>Joined Health Club</b>	<b>21.5% (4.15)</b>	<b>24.2% (3.93)</b>
<b>Attend Health Fairs/Seminars</b>	<b>17.8% (4.28)</b>	<b>17.8% (4.17)</b>
<b>At present, how would you describe your overall health?</b>	<b>74.3% (2.21)</b>	<b>78.4% (2.13)</b>

**Note: Lower Mean Values indicate a greater PHCI Orientation**

**Note: PHCI Index for 2013 was 2.32; PHCI Index for 2003 was 2.13**

The mean values for the “middle” 5 variables are near the “slightly agree” response point, and range from 2.94 (engaging in regular exercise) to 3.42 (regular exercise, lost weight, less alcohol, stress reduction, and changed sleeping habits). The “bottom” 4 lifestyle change variables (changed work habits, changed social life, joining a fitness/wellness center, and attending health fairs/seminars) had mean values

indicating “general disagreement” with the impact of PHCI. In sum, health consumers had a greater orientation toward the use of PHCI in 2003 compared to 2013. **Table 3** depicts the 13 Lifestyle Change Responses significantly associated with the 6 demographic variables in this study.

Since the demographic variables were non-metric, an ANOVA was used to test for significant differences across the 13 lifestyle variables for each demographic. The variables with the most instances of significant differences were age, gender, and income in the 2003 study, and age, gender and education in the 2013 study. Having health insurance and marital status do not show significant differences across demographic categories.

For both surveys, older respondents were more PHCI-oriented for personal lifestyle variables like changed eating habits, not smoking, periodic medical checkups and use of nutritional labeling. Middle age respondents exhibited a greater PHCI orientation for lifestyle changes like losing weight, changing sleeping habits and changing social life. Younger respondents showed a greater PHCI orientation for external activities like joining a health/wellness center and attending health fairs or seminars.

Women exhibited greater PHCI orientation for personal changes such as smoking cessation, medical checkups, nutritional labeling, stress reduction, and losing weight. Women were also more PHCI-oriented for external activities like joining a health club and attending health fairs. Again, there were very few differences in the results of the 2003 and 2013 surveys, except that the overall PHCI orientation was stronger for each of the lifestyle variables in the 2003 study than in the 2013 study.

For health insurance, significant differences were found in the 2013 study for three personal lifestyle variables: smoking cessation, periodic medical checkups and use of nutritional labeling. For marital status, one significant difference was found: periodic medical checkups. This was found in both 2003 and 2013 studies.

With respect to education, better educated persons were more likely to be PHCI-oriented. In the 2003 survey, two significant differences were found: change in sleep habits (less educated) and getting regular exercise (better educated). In 2013, education was again a strong predictor of a PHCI orientation, as significant differences were found for seven lifestyle change variables. These included personal/internal change variables (eating habits, quit smoking, use of nutritional labeling and practicing stress reduction), and external activity lifestyle change variables (joining a health/wellness center and attending health fairs/seminars). The greatest difference between 2003 and 2013 surveys was in the education demographic.

For income level, significant differences were present for three lifestyle change variables for 2003: changing eating habits, stress reduction, and regular exercise. For

2013, significant differences were found in two variables (changing eating habits, regular exercise).

### Evaluation of the Hypotheses (Using the 2013 Survey Results)

**Education:** Those with higher educational attainment were more likely to make positive lifestyle changes such as eating habits, not smoking, use of nutritional labeling, stress reduction, joining a health club/wellness center, and attending health fairs/seminars. Educational attainment was also one of the three demographic variables significantly associated with the PHCI index. Therefore **H<sub>1</sub>** (Respondents with higher educational attainment will have a higher PHCI orientation) is accepted.

**Income:** Higher income respondents tended to be more PHCI-oriented for group exercises and changes in eating habits. Overall however, income level cannot be viewed as a reliable predictor of whether a person has a strong PHCI orientation. Hence, **H<sub>2</sub>** is rejected.

**Health Insurance:** Those who carried health insurance were more inclined to make lifestyle changes as it pertained to smoking cessation, regular check-ups, and use of nutritional labels. However, health insurance was not significantly associated with PHCI index, and **H<sub>3</sub>** is rejected.

**Gender:** Women were more inclined to make lifestyle changes as it pertained to eating habits, regular check-ups, use of nutritional labels, stress reduction efforts, sleeping habits, losing weight, joining health/wellness centers, and attending health fairs/seminars. Gender (women) was significantly associated with PHCI index. **H<sub>4</sub>** is accepted.

**Age:** Older respondents were more inclined to make changes regarding smoking habits, periodic physician checkups, and use of nutritional labeling. Respondents in the 35-44 age group were more inclined to make changes in sleeping habits, weight loss, and change in social life. Younger respondents were more inclined to make changes in work habits, joining a health/wellness center, and attending health fairs/seminars. The direction of the relationship with PHCI orientation indicates that older respondents are more impacted by PHCI.

Older respondents are affected more by PHCI than younger respondents for personal/internal changes, and younger respondents are affected more by PHCI for external change activities. Age Category was not significantly associated with the PHCI index. So accepting **H<sub>5</sub>** must be prefaced concerning the nature of the lifestyle change.

**Marital Status:** **H<sub>6</sub>** hypothesized that married persons would have a higher PHCI and their lifestyles more impacted by PHCI. Only one of the 13 lifestyle change

variables were significantly associated with PHCI (periodic physician checkups). However, the marital variable was significantly associated with the PHCI index.  $H_6$  is rejected.

## Conclusion and Implications

This paper sought to compare the results of two surveys that were 10 years apart, 2003 and 2013. The lifestyle change variables that affected health consumers most strongly were internal and personal, such as changes in eating habits, smoking, medical checkups, and use of nutritional labeling. The acceptance or rejection of the 6 hypotheses were a function of the analysis of the 2013 survey. The results indicated that age, gender and education can be good predictors of the consumer's PHCI-orientation.

More specifically, the objectives of this research were to 1) examine relationships between the propensity to seek out and use PHCI with demographic characteristics, and 2) examine the association between demographic characteristics and lifestyle changes resulting from PHCI.

Three of the 6 hypotheses were accepted. Those that seek and are informed and impacted by PHCI are often women, are better educated, and generally older for internal/personal changes, and younger for external changes. The most important lifestyle changes emanating from PHCI were changes in eating habits, periodic physician checkups, use of nutritional labeling, and smoking cessation. Changes in social life, sleeping habits, regular exercise, and participation in health fairs and seminars were also associated with the utilization of PHCI, but to a lesser extent.

Women in general live longer than men. Our findings suggest that PHCI must be targeted toward men. Marketers must consider creative ways to get men more interested in changing their attitudes concerning diet, smoking habits, regular checkups, use of nutritional labeling, stress reduction, weight loss and other activities that are part of a healthy PHC lifestyle. The same would apply for those with lower educational attainment. Also, efforts should be made to make PHC an attractive alternative for younger respondents and single respondents, regardless of age. In sum, the challenge for policy makers is to successfully market PHC to men, and those with less educated and lower income. These challenges are not new, but the information in this study guides the marketing of PHCI to healthcare consumers that need it the most.

**TABLE 3: Summary of Lifestyle Change Variables and Demographics**

Lifestyle Change Variable	Survey Year	Mean Value <sup>1</sup>	Health Ins	Age	Gender (M/F)	Marital Status	Edu. Level	Income Level
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Change eating habits	2003 2013	2.45 2.61		65+*	F* F*		BS <sup>b</sup>	Higher <sup>b</sup> Higher <sup>a</sup>
Stop smoking	2003 2013	2.40 2.54	Yes <sup>c</sup>	65+, 35-44 <sup>b</sup> 65+, 19-34 <sup>b</sup>	F*		BS <sup>b</sup>	
Periodic checkups	2003 2013	2.34 2.60	Yes <sup>a</sup>	Older <sup>a</sup> Older <sup>a</sup>	F <sup>b</sup> F <sup>a</sup>	Married <sup>a</sup> Married <sup>b</sup>		
Use nutrition labeling	2003 2013	2.39 2.59	Yes <sup>c</sup>	Older <sup>b</sup> Older <sup>b</sup>	F <sup>a</sup> F <sup>b</sup>		BS <sup>a</sup>	
Stress reduction exercise	2003 2013	3.20 3.32			F <sup>b</sup> F <sup>a</sup>		BS <sup>b</sup>	Higher <sup>c</sup>
Change sleeping habits	2003 2013	3.50 3.42		35-44 <sup>b</sup> 35-44 <sup>b</sup>	F <sup>c</sup> F <sup>b</sup>		<BS <sup>c</sup>	
Lose Weight	2003 2013	3.16 3.28		35-44 <sup>c</sup>	F <sup>c</sup>			
Change social life	2003 2013	3.81 3.87		35-44 <sup>b</sup> 35-44 <sup>b</sup>				
Regular exercise	2003 2013	3.06 3.05					BS <sup>a</sup>	Higher <sup>b</sup> Higher <sup>c</sup>
Less alcohol	2003 2013	3.05 3.29						
Change work habits	2003 2013	3.70 3.78		Younger <sup>b</sup>				
Join health club	2003 2013	4.15 4.15		Younger <sup>a</sup> Younger <sup>a</sup>	F <sup>c</sup>		BS <sup>c</sup> BS <sup>b</sup>	
Attend health seminar	2003 2013	4.37 4.28		Younger <sup>a</sup> Younger <sup>a</sup>	F <sup>a</sup> F <sup>a</sup>		BS <sup>c</sup>	
No. of Sig Diff	2003 2013		0 3	8 9	7 9	1 1	2 6	3 2
Sig link with PHCI	2003 2013			Older <sup>a</sup>	F <sup>a</sup> F <sup>a</sup>	Married <sup>c</sup>	BS <sup>a</sup>	

Scale: 1=highest PCHI orientation; 6=lowest PCHI orientation

<sup>1</sup> lower mean values indicate greater PCHI orientation

Confidence: <sup>a</sup>100%, <sup>b</sup>99% <sup>c</sup>95%

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**Keywords:** *Preventive Health Care, Preventive Health Care Information, Wellness, Demographics and Preventive Health Care, Lifestyle Changes due to Preventive Health Care Information.*

**Relevance to Marketing Educators, Researchers and Practitioners:** Preventive health care information (PHCI) is becoming widely distributed as consumers and businesses are increasingly concerned about health-related issues and escalating health care costs. The success of preventive health care is dependent on how well consumers receive information and make lifestyle changes. This means that PHCI delivery systems must target and effectively market the information to those that need it the most. This study contributes to that end by identifying those that are most likely and least likely to utilize PHCI, as well as identifying lifestyle characteristics associated with being more PHC oriented. In summary, the data compares 2003 and 2013 results to assess how well people utilize PCHI, and to note similarities and changes in the ten year period.

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