

Paper PO-46

Using SAS to Examine Health-Promoting Life Style Activities of Upper Division Nursing Students at USC

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ABSTRACT

Health promotion is an important nursing intervention. Research has long shown that one's lifestyle affects health. A health-promoting lifestyle has been described as a multi-dimensional pattern of self-initiated actions that maintain or enhance one's level of wellness, self-actualization, and fulfillment. The purpose of this study was to evaluate the health promotion/life style activities of upper division nursing students in a college of nursing in South Carolina (SC). Specific aims of the study were (1) to measure health-promoting life style activities of upper division nursing students in a college of nursing in the Southeastern United States; (2) to compare the health-promoting life styles of male and female nursing students; (3) to compare the health-promoting life styles of Caucasian students to students of other ethnic groups; and 4) to compare the health-promoting life styles of by marital status. This study used a descriptive, comparative design to assess the health promotion/life style activities of upper division nursing students in a college of nursing in the Southeastern US. Women are often more involved in interpersonal relationships than men and use and provide more social support than men. The result did not reveal any significant difference for total and subscales of health promoting by gender. There were statistically significant differences for white students versus other race in terms of physical activity, nutrition, and interpersonal relations. There was significant difference for physical activity by marital status. However, there were not any statistical differences for other subscales by marital status.

Keywords: Health Promoting

University of South Carolina, College of Nursing.

INTRODUCTION

Health care of today has shifted from illness centered to health promotion and prevention, and promoting healthy lifestyles for patients is an important nursing intervention (Haddad, Kanem, Rajacich, Cameron, & Al-Ma'aitah, 2004). Consequently, nursing schools have added health promotion/prevention content to their curricula; however, student nurses often do not practice healthy lifestyles themselves (Stark, Manning-Walsh, & Vliem, 2004). Developing a self-nurturing lifestyle demands time and effort which nursing students in demanding programs often do not have.

Purpose

The purpose of this study was to evaluate the health promotion/life style activities of upper division nursing students in a college of nursing in university of South Carolina. Specific aims of the study were (1) to measure health-promoting life style activities of upper division nursing students in a college of nursing in the Southeastern United States; (2) to compare the health-promoting life styles of male and female nursing students; (3) to compare the health-promoting life styles of Caucasian students to students of other ethnic groups; and 4) to compare the health-promoting life styles of by marital status.

Background

Research has long shown that one's lifestyle affects health (Can et al., 2008, Lalonde, 1974, Pender, 1996). A health-promoting lifestyle has been described as a multi-dimensional pattern of self-initiated actions that maintain or enhance one's level of wellness, self-actualization, and fulfillment (Pender, 1987). Pender's (1987) Health Promotion Model (HPM) identifies a profile of self-initiated, health-promoting behaviors that maintain or enhance health and wellness. Those components of a healthy lifestyle include physical activity, nutrition, interpersonal relations, spiritual growth, and stress management. Individuals need to possess the knowledge of what behaviors promote a healthy lifestyle and the skills to engage in those behaviors. The HPM also suggests that demographic, biologic, and situational factors affect health-promoting behaviors. Among demographic variables, gender, ethnicity, and socioeconomic status have been shown to influence significantly health-promoting behaviors (Felton, Parsons, & Bartoces, 1997).

Method

This study used a descriptive, comparative design to assess the health promotion/life style activities of upper division nursing students in a college of nursing in the Southeastern US. Gender and racial/ethnic differences will be examined. The sample was recruited from 234 upper division nursing students enrolled in an Evidence-based Practice course in a nursing school in SC. Inclusion criteria were: (1) English speaking; (2) upper division student enrolled in Nurs 400; and (3) ability to give informed consent. This study took place entirely at a college of nursing in the Southeastern US. Demographics were measured with a questionnaire developed for this study. Demographics included: age, race/ethnicity, gender, and marital status. Health-promoting lifestyle was measured with the Health-Promoting Lifestyle Profile II (HPLP II) (Walker, Sechrist, & Pender, 1995). The HPLP II consists of 52 statements about present way of life or personal habits. Six subscales include: Health responsibility, Physical Activity, Nutrition, Spiritual growth, Interpersonal relations, and stress management. Responses are made on a 4-point Likert scale (1= never; 4= routinely). A score for overall health-promoting lifestyle is obtained by calculating a mean of the individual's responses to all 52 items. Scores for the six subscales are obtained similarly by calculating a mean of the responses on each subscale. Students in NURS 400 were asked to fill out the demographic assessment and to complete the HPLP II. Students filled out these assessments online using Flashlight technology. Descriptive statistics were computed on all study variables. For categorical variables, the univariate statistics included frequency distributions. For continuous variables statistics included measure of central tendency (mean and median) and measure of spread (standard deviation and range). The means for the 400 students on the total scale score and for the six subscales on the HPLP II were compared to means reported in the literature. T-tests were used to test total scale and subscale differences for gender and race, ethnicity. Alpha reliability coefficient was assessing using Proc Corr. All data analyses were performed using SAS/STAT[®] version 9.4 (SAS, 2013). Proc Freq and Means in SAS used to describe sample. Proc Corr and T-test in SAS examined the inferential statistics.

Result

Two-hundred- and six undergraduate students took part in this study. Ninety-six percent of the sample was women, 81% were white, 89% were single, and 58% work. The majority of students did not have children (88%). Internal consistency reliability (Cronbach's alpha) has been reported as .91 for the total score and ranges from .78 to .82 on the six subscales (Stark et al., 2004). Internal consistency reliability (Cronbach's alpha) for this sample was .94 for the total scale. Internal consistency reliability for the subscales ranged from .79 to .86. The subscales of the HPLP were examined for differences across demographic variables.

Table 1. N, Means, Standard Deviations, Minimum, and Maximum for HPLP Subscales

Scale	N	Mean	Std Dev	Minimum	Maximum
HEALTH-PROMOTING LIFESTYLE	206	2.80	0.41	1.94	4.00
HEALTH RESPONSIBILITY	206	2.50	0.53	1.11	4.00
PHYSICAL ACTIVITY	206	2.56	0.71	1.13	4.00
NUTRITION	206	2.77	0.52	1.44	4.00
SPIRITUAL GROWTH	206	3.29	0.50	1.44	4.00
INTERPERSONAL RELATIONS	206	3.17	0.45	1.89	4.00
STRESS MANAGEMENT	206	2.46	0.54	1.13	4.00

Table 1 showed the means of health promoting lifestyle for total and six subscales. The mean for total subscale was 2.80 with standard deviation of .41. The highest mean was for spiritual growth (mean =3.29 with SD=.50) and the lowest mean was for stress management (mean=2.46 with SD=.54).

Table 2. N, Means, Standard Deviations, Minimum, and Maximum for HPLP Subscales by Race

RACE	N Obs	Scale	N	Mean	Std Dev	Minimum	Maximum
white	166	HEALTH-PROMOTING LIFESTYLE	166	2.83	0.41	1.94	4.00
		HEALTH RESPONSIBILITY	166	2.49	0.53	1.11	4.00
		PHYSICAL ACTIVITY	166	2.61	0.70	1.13	4.00
		NUTRITION	166	2.82	0.51	1.44	4.00
		SPIRITUAL GROWTH	166	3.30	0.51	1.44	4.00
		INTERPERSONAL RELATIONS	166	3.22	0.43	2.11	4.00
		STRESS MANAGEMENT	166	2.49	0.53	1.25	4.00
other	40	HEALTH-PROMOTING LIFESTYLE	40	2.67	0.41	1.96	4.00
		HEALTH RESPONSIBILITY	40	2.50	0.53	1.67	4.00
		PHYSICAL ACTIVITY	40	2.33	0.73	1.13	4.00
		NUTRITION	40	2.55	0.53	1.67	4.00
		SPIRITUAL GROWTH	40	3.24	0.47	2.22	4.00
		INTERPERSONAL RELATIONS	40	2.97	0.45	1.89	4.00
		STRESS MANAGEMENT	40	2.34	0.57	1.13	4.00

Table 2 showed the means of health promoting lifestyle for total and six subscales by race. There was significant difference for total health promotion by race ($t=2.32$ with $P=.0213$). An unexpected result was that whites reported more spiritual growth than other ethnic groups, that difference was not significant. There were statistically significant differences for white students versus other race in terms of physical activity ($t=2.26$, $P=.0246$), nutrition ($t=3.00$, $P=.0003$), and interpersonal relations ($t=3.21$, $P=.0016$).

Table 3. N, Means, Standard Deviations, Minimum, and Maximum for HPLP Subscales by Marital Status

MARITAL STATUS	N Obs	Scale	N	Mean	Std Dev	Min	Max
single/separated/ divorce/widowed	183	HEALTH-PROMOTING LIFESTYLE	183	2.81	0.41	1.94	4.00
		HEALTH RESPONSIBILITY	183	2.49	0.52	1.11	4.00
		PHYSICAL ACTIVITY	183	2.59	0.70	1.13	4.00
		NUTRITION	183	2.78	0.51	1.44	4.00
		SPIRITUAL GROWTH	183	3.28	0.52	1.44	4.00
		INTERPERSONAL RELATIONS	183	3.18	0.45	1.89	4.00
		STRESS MANAGEMENT	183	2.48	0.55	1.25	4.00
married/partner	23	HEALTH-PROMOTING LIFESTYLE	23	2.72	0.42	2.02	3.56
		HEALTH RESPONSIBILITY	23	2.55	0.62	1.67	3.78
		PHYSICAL ACTIVITY	23	2.26	0.72	1.13	3.88
		NUTRITION	23	2.68	0.63	1.67	3.89
		SPIRITUAL GROWTH	23	3.36	0.36	2.78	4.00
		INTERPERSONAL RELATIONS	23	3.08	0.40	2.33	3.78
		STRESS MANAGEMENT	23	2.27	0.46	1.13	3.00

Table3 indicated the means of health promoting lifestyle for total and six subscales by marital status. There was not significant difference for total health promotion by marital status ($t=1.04$ with $P=.2988$). There was significant difference for physical activity by marital status ($t=2.14$, $P=.0334$), However, there were not any statistical differences for other subscales by marital status

Table 4. N, Means, Standard Deviations, Minimum, and Maximum for HPLP Subscales by Gender

gender	N Obs	Scale	N	Mean	Std Dev	Min	Max
female	198	HEALTH-PROMOTING LIFESTYLE	198	2.80	0.41	1.96	4.00
		HEALTH RESPONSIBILITY	198	2.50	0.53	1.11	4.00
		PHYSICAL ACTIVITY	198	2.54	0.72	1.13	4.00
		NUTRITION	198	2.77	0.52	1.44	4.00
		SPIRITUAL GROWTH	198	3.30	0.49	1.67	4.00
		INTERPERSONAL RELATIONS	198	3.18	0.44	1.89	4.00
		STRESS MANAGEMENT	198	2.46	0.55	1.13	4.00
male	8	HEALTH-PROMOTING LIFESTYLE	8	2.77	0.50	1.94	3.56
		HEALTH RESPONSIBILITY	8	2.39	0.58	1.67	3.67
		PHYSICAL ACTIVITY	8	2.89	0.45	2.25	3.38
		NUTRITION	8	2.74	0.73	2.00	3.89
		SPIRITUAL GROWTH	8	3.13	0.83	1.44	4.00
		INTERPERSONAL RELATIONS	8	3.01	0.55	2.22	3.56
		STRESS MANAGEMENT	8	2.44	0.45	1.75	3.13

Table 4 showed the means of health promoting lifestyle for total and six subscales by gender. Although women reported more interpersonal relationships and spiritual growth than men, the results were not significant. Although men reported slightly more physical activity, the difference was not significant. Men and women reported the same level of stress management. The result did not reveal any significant difference for total and subscales of health promoting by gender.

Conclusion

PROC T-TEST used to examine Health Promoting lifestyle for nursing student s at USC by demographic variables. Health promotion is an important nursing intervention; however, nursing students often do not practice healthy lifestyles as they juggle school, work, and family responsibilities. Women are often more involved in interpersonal relationships than men and use and provide more social support than men. The result did not reveal any significant difference for total and subscales of health promoting by gender. There were statistically significant differences for white students versus other race in terms of physical activity, nutrition, and interpersonal relations. There was significant difference for physical activity by marital status. However, there were not any statistical differences for other subscales by marital status. It is important to examine health promotion for nursing student because nursing school is extremely demanding and stressful with little time for other activities, and places students at risk for poor performance and stress related illnesses. Offering assistance to develop time management and stress management skills may assist these students to reduce some of the stress in their lives.

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Attachment A

SAS Syntax

```
Ods rtf; ods listing close;
```

```
proc freq data=one;  
  tables sex -- LIFE52;  
  title ' frequency tables '; run;
```

```
proc means data=two noprint;  
  var thpl -- tsm;  
  title ' means ';  
run;  
ods rtf close; ods listing; quit; run;
```

```
Ods rtf; ods listing close;
```

```
%macro corr (q,t);  
proc corr nocorr alpha nomiss data=two;  
  var &q;  
  title ' Reliability coeffcient' &t;  
%mend corr;
```

```
%corr (life1-life52, total scale);  
%corr (life3 life9 life15 life21 life27 life33 life39 life45 life51,HEALTH RESPONSIBILITY );  
%corr (life4 life10 life16 life22 life28 life34 life40 life46,PHYSICAL ACTIVITY );  
%corr (life2 life8 life14 life20 life26 life32 life38 life44 life50,NUTRITION );  
%corr (life6 life12 life18 life24 life30 life36 life42 life48 life52,SPIRITUAL GROWTH);  
%corr (life1 life7 life13 life19 life25 life31 life37 life43 life49,INTERPERSONAL RELATIONS);  
%corr (life5 life11 life17 life23 life29 life35 life41 life47,STRESS MANAGEMENT);  
run;
```

```
%macro ttest (q);  
proc ttest data=two plots=none;  
  class &q;  
  var thpl -- tsm;  
  title ' ttest ';  
run;
```

```
%mend ttest;  
%ttest (sex);  
%ttest (raceg);
```

```
%ttest (martg);  
%ttest (nchildg);  
%ttest (empg);
```

```
run;  
ods rtf close; ods listing; quit; run;
```