

Physical Activity Counseling Through Registered Nurses in a Hospital Setting

Patrick W. Steele, RN

Department of Kinesiology

Kansas State University

Introduction

Overview

- Nurses have a large volume of direct patient contact time during the workday
- Registered Nurses are trained to provide patient counseling based on the patients needs
- Nurses are provided with the opportunity of “teachable moments” to provide one-on-one training to individuals who find themselves to be receptive to to health suggestions

Underutilization

- -49.7% surveyed nurses did not report PA promotion (Burns, Camaione & Chatterson, 2000)
- -727 surveyed, 58% nurse practitioners provided PA counseling (Reeve Et al. 2004)

Purpose of study

- Examine barriers of registered nurses associated with physical activity in a hospital setting.

Nurses barriers to providing PA counseling

- Lack of training (Nursing school/ Continuing Education)
- Nurses inability to adopt healthy behaviors
- Lack of desire to promote PA due to individuals own PA levels

Health habits of the Registered Nurse

- Many nurses report being physically inactive (Zapka et al.2009)
- High levels of PA barriers (CDC, 2011)
- High level of obesity in the profession (Tucker et al. 2010), (Han, Trinkoff, Storr & Geiger-Brown, 2011)

Barriers to PA

- High Stress situation, shift differentials and night shifts (Zapka et al. 2009)
- Predominately female workforce, with reported family/spousal/childhood responsibilities (Tucker et al.2011)

Nursing and PA counseling

- Few studies addressed PA promotion through Nurses
- Studies which have, showed nurses who regularly engaged in PA were more likely to educate about PA for health promotion (Esposito & Fitzpatrick, 2011)

Purpose of the study

- a) To describe the physical activity levels and barriers to physical activity reported by hospital-based RNs
- b) To determine if perceived barriers to physical activity are related to whether RNs provide PA counseling to their patients
- c) To determine if physical activity levels of RNs are related to whether RNs provide PA counseling to their patients

Proposed study hypothesis:

- The number and type of nurses' perceived personal barriers to physical activity are related to nurses' decision to provide PA counseling.
- Higher levels of light, moderate and vigorous physical activity are positively related to nurses' decision to provide PA counseling

Methods

Web based survey

- Web based survey to gather:
 - Current PA levels
 - Barriers to PA
 - Nurses decision to provide PA counseling

Procedures

- Hospital based surveys.
 - Multi-state survey (Kansas, Missouri, New Mexico, Arizona)
 - Online survey through Kansas State University Qualtrics.
Distribution through Chief Nursing officers and hospitals
Internet.
 - Survey Began September 28th, 2013. Ended January 1st, 2014
 - Anonymous reporting with no personal identifying information obtained

Procedures cont.

- IRB Approval Received
- Hospital nursing administrators contacted to participate in survey
- Survey distributed through online survey system
- Data pruned and purged of participants who did not meet criteria for the study
- Data collated into categories to establish variables of study

Participants

- Criteria:
 - Licensed Practical Nurse or Registered Nurse.
 - Actively Employed in a hospital setting
 - Worked in a position which provided direct patient care/education.

Participants cont.

- 431 completed surveys
- 323 surveys used for study (N=323)
- Survey included the following:
 - Demographic Data (Gender, years worked, Degree)
 - PA education Level (nursing school/CEU)
 - Current PA (Light, Moderate, Vigorous PA)
 - Current shift worked (Day, Night, Rotating)
 - Perceived barriers to PA

Data gathered using 4 point Likert Scale:

4: Strongly Disagree
1: Strongly Agree

- Exercising takes too much of my time
- Exercise tires me
- Places for me to exercise are too far away
- I am too embarrassed to exercise
- It costs too much to exercise
- Exercise facilities do not have convenient schedules for me
- I am fatigued by exercise
- My partner (or significant other) does not encourage me to exercise
- Exercise takes too much time from family relationships
- I think people in exercise clothes look funny
- My family members do not encourage me to exercise
- Exercise takes too much time from my family responsibilities,
- Exercise is hard work for me,
- There are too few places for me to exercise.

PA counseling

DiClemente & Prochaska's Stages of Change Theory(*Prochaska, Prochaska & DiClemente, 1991*)

- I don't promote physical activity and I don't intend to start **Precontemplation**
- I don't promote physical activity but I'm thinking of starting **Contemplation**
- I promote physical activity sometimes but not regularly **Preparation**
- I promote physical activity regularly but just started recently **Action**
- I promote physical activity regularly (for longer than 6 months) **Maintenance**
- I have promoted physical activity in the past but not now **Termination**

PA counseling cont.

Divided into two group:

- Not Actively counseling PA

- I don't promote PA and don't intend to start
- I don't promote PA but I'm thinking of starting
- I have promoted PA in the past but not now

- Actively Counseling PA

- I promote PA but recently started
- I promote PA and have been for longer than 6 months

Results

Results

Age	N	%	Gender	N	%
20-29 years old:	73	22.6	Male	25	7.7
30-39 years old	84	26.0	Female	296	91.6
40-49 years old	75	23.2	Did Not Specify	2	0.6
50-59 years old	64	19.8			
60+ years old	25	7.7			
Did not Specify	2	0.6			

Degree Completed	N	%	Years worked in nursing	N	%
LPN	44	13.6	0-1 years	11	3.4
ADN	78	24.1	1-5 years	90	27.9
BSN	181	56.0	5-10 years	68	21.1
Diploma	20	5.9	10+ years	153	47.4
Did Not Specify	1	0.3			

Results

(N=323)

PA ed. in nursing school	N	%	PA ed. through continuing education	N	%
Yes	167	51.7	Yes	118	36.5
No	155	48.0	No	199	61.6
No Answer	1	.3	No Answer	6	1.9

Shift worked	N	%	Current physical activity	N	%
Days	211	65.3	0-1 days per week:	108	33.4
Nights	108	33.4	2 days per week:	59	18.3
Did not report	4	1.2	3 days per week:	65	20.1
			4 days per week:	37	11.5
			5+ days per week:	53	16.4
			Did not answer:	1	0.3

Current PA counseling

<i>Statement:</i>	<i>Stage</i>	<i>Ns</i>	<i>Percentage</i>
I don't promote PA and don't intend to start	Precontemplation	15	4.6
I don't promote PA but I'm thinking of starting	Contemplation	10	3.1
I promote PA sometimes but not regularly	Preparation	98	30.3
I promote PA regularly but just started recently	Action	23	7.1
I promote PA regularly (for longer than 6 months)	Maintenance	164	50.8
I have promote PA in the past but not now	Relapse??	10	3.1

Results

Perceived Barrier (EBBS)

(strongly agree, agree)

(disagree, strongly disagree)

Exercise takes too much time from my family responsibilities	36.8% (119)	62.8% (203)
Exercise Tires me	36.2% (117)	63.8% (206)
Facilities have inconvenient schedules	32.8% (106)	67.2% (217)
Exercise takes too much time from family relationships	30.7% (99)	69.3% (224)
My partner doesn't encourage me to exercise	30.3% (98)	69.3% (224)
Places to exercise are too far away	28.8% (93)	71.2% (230)
My family doesn't encourage me to exercise	28.8% (93)	70.9% (229)
Exercise takes too much time	28.2% (91)	71.8% (232)
It costs too much to exercise	26.9% (87)	72.8% (35)
There are too few places to exercise	22.6% (73)	76.8% (248)
I'm too embarrassed to exercise	17.3% (56)	82.4% (266)
Exercise is too hard for me	11.1% (36)	(88.9% (287))
Exercise clothes looks funny	5.6% (18)	94.4% (305)

% does not add to 100% due to small amount of missing variables

Results

Perceived barriers to physical activity and Current PA counseling.

Perceived Barrier	RNs who Counsel Mean (SD)	RNs who do not counsel PA Mean (SD)	T Test
Exercise Takes too much time	3.03(.758)	2.71(.726)	-3.815*
Exercise Tires me	2.93(.762)	2.57(.688)	-4.396 *
Places to Exercise are too far away	3.02(.845)	2.74(.787)	-3.032 *
I'm too embarrassed to exercise	3.24(.792)	3.09(.081)	-1.776
It costs too much to exercise	3.05(.900)	2.87(.839)	-1.794
Facilities have inconvenient schedules	2.88(.902)	2.69(.845)	-1.933
My partner doesn't encourage me to exercise	3.10(.856)	2.63(.960)	-4.477*
Exercise takes too much time from family relationships	2.96(.815)	2.67(.785)	-3.182*
Exercise clothes looks funny	3.49(.599)	3.29(.635)	-2.857*
My family doesn't encourage me to exercise	3.12(.795)	2.68(.876)	-4.545*
Exercise takes too much time from my family responsibilities	2.91(.878)	2.56(.810)	-3.673*
Exercise is too hard for me	3.36(.600)	3.02(.674)	-4.696*
There are too few places to exercise	3.12(.757)	2.87(.811)	-2.751

* denotes statistically significant $p < .05$ Note: Promotes Physical Activity counseling N=187; Does Not Promote Physical Activity counseling N= 133

Results

Current PA counseling by current physical activity levels

Do Not Promote Physical Activity: N= 131 Do promote Physical Activity: N=185

Physical Activity	Nurses who counsel PA Mean (SD)	Nurses who don't counsel PA Mean (SD)	T Test
Light Physical Activity	3.17(1.176)	2.72(1.139)	-3.436*
Moderate Physical Activity	2.13(.885)	1.69(.775)	-4.605*
Vigorous Physical Activity	1.80(2.13)	1.50(1.69)	-3.256*

* Denotes statistically significant $p < .05$

What we found

- Predominately female
- Bachelors degree in nursing
- 10+ years of experience
- 57.9% report routine PA counseling to patients
- Low levels of PA
 - Consistent with other research studies
- High levels of barriers to PA
 - Family/relationships reported highest barrier, followed by being too tired to participate
- Correlation between PA levels and PA counseling
- Correlation between PA barriers and PA counseling

What we concluded

- Nurses who reported high levels of barriers to physical activity were less likely to promote physical activity education to patients
- Nurses who reported higher levels of participation in physical activity were more likely to counsel patients in regards to PA promotion.

Strengths of this study

- Multiple hospitals utilized
- Large survey response
- Largely unexamined field of nursing research

Limitations & future studies

- Only identified relationships among variables, unable to infer causality.
- Frequency, type and quality of counseling was not assessed
- No assessment of the characteristics of the patients:
(socioeconomic status, education)
- Health status of patient may play important factor in PA counseling
- Self reported PA levels may be inaccurate due to recall error, social desirability bias, etc.

What this all means

- Policies and interventions to promote PA of employees in a hospital setting
 - Flexible hours
 - On site fitness/wellness programs
 - Promotion of PA during scheduled breaks
 - Education to PA promotion and overcoming PA barriers

Conclusion

- Nurses are provided with excellent opportunities to provide PA counseling
- Physically active nurses provide higher levels of PA counseling to patients, however many nurses report barriers to being physically active.
- Hospitals and organizations can improve quality of life in both nurses and patients by reducing barriers nurses face to being physically active
- More research is needed to assess the overall quality of counseling that patients receive on physical activity.

Acknowledgements

- Advising Committee
 - Dr. Mary McElroy
 - Dr. Katie Heinrich
 - Dr. Ric Rosenkranz
- Special thanks
 - Joey Lightner, MPH

References

- Burns, K,J, Camaione, D. Chatterton, T. (2000) Prescription of physical activity by adult nurse practitioners: a national survey. *Journal of Family Practice*. 49(2) 158-168.
- Han K, Trinkoff A M, Storr C L, Geiger-Brown J, (2011). Job stress and work schedules in relation to nurse obesity. *Journal of Nursing Administration*, 41(11), 488—495
- DiClemente, C. Prochaska, J. Fairhurst, S., Velicek, W. Velasquez, M. & Rossi, J. (1991) The process of smoking cessation: An analysis of precontemplation, contemplation and preparation stages of change. *Journal of Consulting and Clinical Psychology*. 59, (2) 295-304.
- Esposito, E. & Fitzpatrick, J. (2011) Registered nurses' beliefs of the benefits of exercise, their exercise behavior and their patient teaching regarding exercise. *International Journal of Nursing Practice*. 17 351-356.
- Reeve, K., Byrd, T., & Quil, B.E. (2004). Health promotion attitudes and practices of Texas nurse practitioners. *Journal of the American Academy of Nurse Practitioners*. 16(3), 125-133.
- Tucker, S. J., Lanningham-Foster, L., Murphy, J. N., Thompson, W. G., Weymiller, A. J., Lohse, C., & Levine, J. A. (2011). Effects of a worksite physical activity intervention for hospital nurses who are working mothers. *AAOHN Journal*, 59(9), 377-386.
- Zapka, J., Lemon, S., Magner, R., & Hale, J. (2009) Lifestyle behaviours and weight among hospital-based nurses. *Journal of Nursing Management* 17, 853-860.