

# **Workplace Related Quality of Life: Effect of Available Recreation Facilities on Physical Activity and Nutrition**

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# Faculty Disclosure

<b>Faculty Name:</b>	<b>Amber Vermeesch, PhD, MSN, RN, FNP-C</b>
Conflicts of Interest:	NONE
Employer:	University of Portland School of Nursing
Sponsorship / Commercial Support	University of Portland School of Nursing & Arthur Butine Development Fund

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Conflicts of Interest:	NONE
Employer:	University of Portland School of Nursing
Sponsorship / Commercial Support	University of Portland School of Nursing & Arthur Butine Development Fund



# Goals

## Session Goal:

Overall session goal is to provide an overview of a recent workplace quality of life research study and its implications on faculty and staff of a small private university



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# Objectives

## Learning Objectives:

- To identify 3 factors noted by faculty and staff members affecting their workplace wellbeing.
  - Expanded content: Learners will be able to identify the most common factors in the context of workplace wellbeing for faculty and staff. Factors include time barriers, restricted access to facilities due to limited hours, or under availability of access to convenient nutritious food.



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# Objectives

## Learning Objectives:

- To summarize how a recreational facility affects physical activity and nutritional options on a university campus.
- Expanded content: Learners will be able to discuss the idea of presenteeism and the influence of physical activity and access to recreational facilities and nutritional options in the context of workplace wellbeing.



# Background

- Health-related quality of life indicators affect overall productivity and well-being
- Physical inactivity is a pandemic  
(Kohl et al., 2012)
- Physical inactivity increases risk of non-communicable diseases & linked to 9% (5.3 million) of deaths in 2008  
(Lee, Shiroma, Lobelo, Puska, Blair, Katzmarzyk, & Lancet Physical Activity Series Working Group, 2012).



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# Background

- Less than 53.9% of adults met the 2008 federal guidelines for physical activity (PA) (Schoenborn, Adams, & Peregoy, 2013).
- Workplace settings are key for PA and wellness promotion and program development (Kohl et al, 2012).
- Environmental settings such as workplaces can positively affect health status (Sallis, Floyd, Rodriguez, & Saelens, 2012).



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# Background

- Workplace environments should be:
  - Conducive to adopting healthy behaviors
  - Aid in promotion of improved quality of life, decrease stress, improved overall employee satisfaction, and favorably influence clinical outcomes (Després, Almeras, & Lise, 2014).
- Workplace wellness programs should have:
  - 1) Stakeholder engagement,
  - 2) Employee participation and involvement,
  - 3) Organizational culture,
  - 4) Effect on direct medical economic outcomes,
  - 5) Effect on indirect costs,
  - 6) Effect on humanistic outcomes, and
  - 7) Effect on clinical outcomes (Morrison, & MacKinnon, 2008).



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# Purpose

To determine workplace quality of life status of faculty/staff at a small private university located in the Pacific Northwest of the United States of America and the effect of current and future workplace recreation facilities on physical activity levels and nutrition status.



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# Methods

- Baseline survey (February – March 2015) & 4 months after new wellness facility opened (August – November 2015)
- No identifying data
- Quantitative questions included:
  - CDC Health-Related Quality of Life (14 questions)
  - International Physical Activity Questionnaire (7 questions)
  - Automated Self-Administered 24-hr Dietary Recall
  - 5 questions regarding current recreation facilities
- Qualitative questions included:
  - 3 open-ended questions regarding workplace related recreational needs



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# Methods

## Data analysis

- analyzed at baseline & at 4 month f/u
- Group comparisons made before/after opening of facility
- Open-ended questions analyzed using content analysis to identify themes



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# Results

## Participants

- 75.1% stating health as very good/excellent
- 66.7% had 0 days in the past month where poor physical/mental health restricted usual activities
- More women than men participated
  - 65.5% and 34.5% pretest vs 87.5% and 12.5% posttest
  - Between ages of 30-49 years old (51% & 68.8%)



# Results

- Beforehand, 75% planned to use  $\geq 1x$  per week
- Afterwards, 46.7% reported actually using  $\geq 1x$  per week
- Reported a recreation facility on campus was very important ( $M=4$  out of 5,  $SD=1.41$ )
- Listed having more classes, more early hours, a pool, specific lockers, and decreased cost as essential



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# Results: 24 hr. dietary recall

- ASA 24 hr. dietary recall Mean amounts (Standard Deviation)

Food Groups	Pretest	Posttest	RDA for a 2,000 calorie diet	All Respondents (N=36)
Grains (ounce eq.)	5.69 (2.82)	5.03 (3.51)	6	5.34 (3.18)
Whole Grains	1.43 (1.57)	0.95 (1.33)		1.17 (1.44)
Non-Whole Grains	4.26 (2.98)	4.03 (3.33)		4.14 (3.12)
Vegetables (cup eq.)	1.98 (1.20)	2.34 (1.38)	2.5	2.17 (1.29)
Milk (cup eq.)	1.73 (1.14)	1.19 (1.03)	3	1.44 (1.11)
Fruits (cup eq.)	1.27 (1.11)	1.23 (0.75)	2	1.25 (0.92)
Cooked lean meat (ounces)	3.94 (2.96)	3.54 (3.10)	5.5	3.73 (2.97)

Micronutrient	All Respondents (N=36)	RDA: Men	RDA: Women
Calcium	902.09 mg (406.51)	1,000 mg	1,000 mg
Potassium	2723.14 mg (974.98)	4,700 mg	4,700 mg
Sodium	3460.61 mg (1638.46)	<2,300 mg	<2,300 mg
Vitamin C	97.82 mcg (71.33)	90 mg	75 mg
Cholesterol	287.74 mg (208.28)	<300 mg	<300 mg
Vitamin D (D2 + D3)	4.10 mcg (3.49)	15 mcg	15 mcg
Folate, total	459.90 mcg (218.09)	400 mcg	400 mcg

# Results: 24 hr. dietary recall

- ASA 24 hr. dietary recall Mean amounts (Standard Deviation)

Macronutrient	All Respondents (N=36) Mean amounts (Standard Deviation)	RDA: Men	RDA: Women
Energy	1835.52 kcal (708.51)	2,600	2,000
Protein	73.00 g (35.15)	56 g	46 g
Total Fat	72.95 g (34.62)		
Carbohydrates	213.49 g (90.16)	130 g	130 g
Water	2761.56 g (1130.27)	3700 g	2700 g
Alcohol	9.63 g (16.60)	>17 g	>34 g
Caffeine	128.64 mg (96.28)		
Sugars, total	88.58 g (45.72)		
Fiber, total dietary	20.66 g (9.62)	31 g	25 g

Macronutrient	Pretest	Posttest
Mean amounts (Standard Deviation)		
Energy	1944.61 kcal (668.89)	1737.92 kcal (746.40)
Protein	79.50 g (34.64)	67.48 g (35.51)
Total Fat	79.56 g (37.00)	67.03 g (32.18)
Carbohydrates	227.94 g (77.26)	200.55 g (100.63)
Water	2738.80 g (1209.68)	2781.92 g (1087.37)
Alcohol	6.11 g (9.09)	12.78 g (20.98)
Caffeine	130.90 mg (83.04)	126.63 mg (109.03)
Sugars, total	96.09 g (42.63)	81.86 g (48.45)
Fiber, total dietary	20.28 g (9.03)	21.00 g (10.36)

# Results: Eating Environment

## When are people eating?

**Breakfast** – 5:30 a.m. to 9:45 a.m.

(majority **7 a.m. to 8 a.m.** N = 18) N = 34

**Lunch** – 11 a.m. to 1:45 p.m. (Majority **12 p.m. to 12:30** p.m. N = 20) N = 36

**Dinner** – 5:15 p.m. to 10:30 p.m.

(Majority **5:30 p.m. to 6:30** p.m. N = 22) N = 36

**Snacks** – **10 a.m.** N = 9; **3 p.m.** N = 8

## Who are they eating with?

**Breakfast** – **Eat Alone** N = 19 (N = 34)

**Lunch** – **Eat Alone** N = 18 (N = 36)

**Dinner** – With Family Member(s) N = 26 (N = 36)

**Snacks** – **Majority Eat Alone**

## Are they eating with computer or TV?

Majority selected **neither** for breakfast, lunch and dinner

**Snacks** – majority eating with computer or TV

## Where are they eating?

**Breakfast** – Home (N = 30) (N = 34)

**Lunch** – **Work** (not in a cafeteria) (N = 17) (N = 36)

**Dinner** – Home (N = 29) (N = 36)

**Snacks** – **Work and Home**

## Source of foods

**Majority use Supermarket or grocery store**

(Breakfast, lunch, dinner and snacks)

Lunch – N = 9 school cafeteria; N = 10 (fast food, restaurant, bar or tavern, other cafeteria)





# Results: Food Security

- Participants (~80%) were able to eat enough of the kinds of food they wanted
- Participants (~35%) reported often/sometimes couldn't eat balanced meals



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- Participants (~71%) reported sometimes kinds of food they wanted were not available
- Participants (53%) reported only sometimes felt like had time to eat acceptable foods

**Participants 86% reported new recreation and wellness facility did not influence health & nutrition answers**

# Conclusion

- Increase number of components recommended by Morrison & MacKinnon (2008) as essential to successful workplace wellness programs
- Currently, none of the seven components seems complete



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# Conclusion

- Workplace environments should be:
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- Workplace wellness programs should have:
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# Conclusion

- Offerings of nutrition classes
- Implementing a campus wellness challenge with participation incentives
- Increasing flexibility in meal options
- Reducing long wait times for procuring food



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# Conclusion

- Workplace environments affects overall well-being
- Strategies to improve workplace quality of life should be further explored
- Campuses can be role models & incubators for creating environments to promote health & wellness
- Faculty & staff to role model healthy behaviors to students through improved campus environments



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