

# Evaluation Barriers for Physical Activity Among Registered Nurses in the Central Valley

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# Introduction

- The importance of physical activity
- Registered nurses are among lowest in activity compliance
- Consequence of Physical inactivity



**Are healthcare workers  
healthier than their patients?**

# Problem Statement

- This paper debates that although registered nurses are active in their **occupational physical demands** which may include walking, standing, lifting, and moving, registered nurses are **often not actually physically healthy**.



# Purpose of the project

## The first stage

- current physical activity level
- barriers that prevent routine exercising,
- possible solutions overcome these

## The second stage

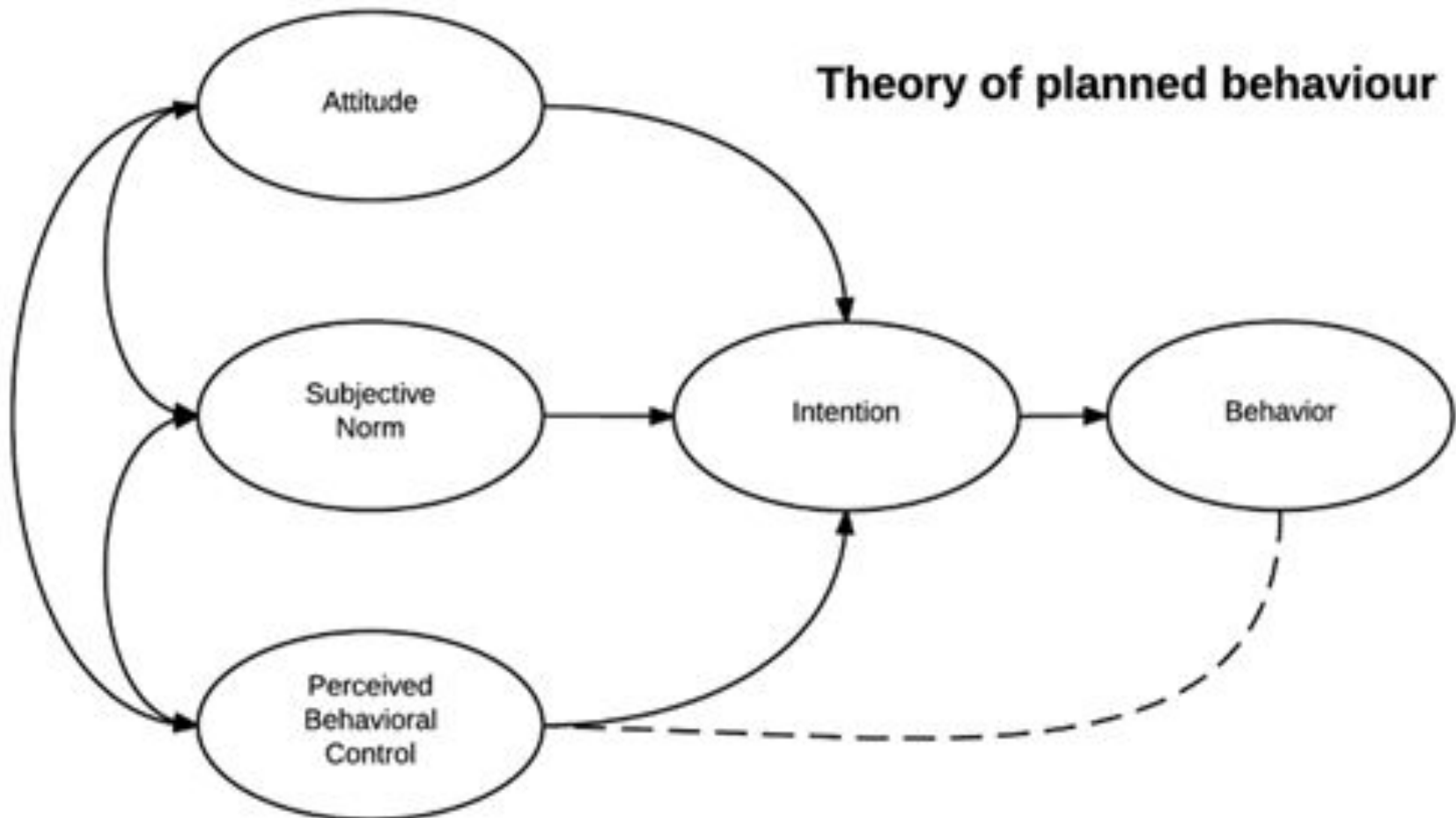
- present a comprehensive plan of improvement to the administration of the healthcare network

## GOAL

- raise the educational awareness and encourage intervention for RN to participating in physical activity.

# Theoretical Framework

- Figure 1  
Relationship between the Concepts (Ajzen, P182, 1991)



# Review of the literature

1

Exercise in a healthy lifestyle and stress management in healthcare workers  
Walker et al. (1987).CDC(2022)

2

Serious work-related issues  
Aiken et al. (2011),

3

Reduced activity levels and increase the risk of occupational fatigue and injuries  
Trinkoff et al. (2005).

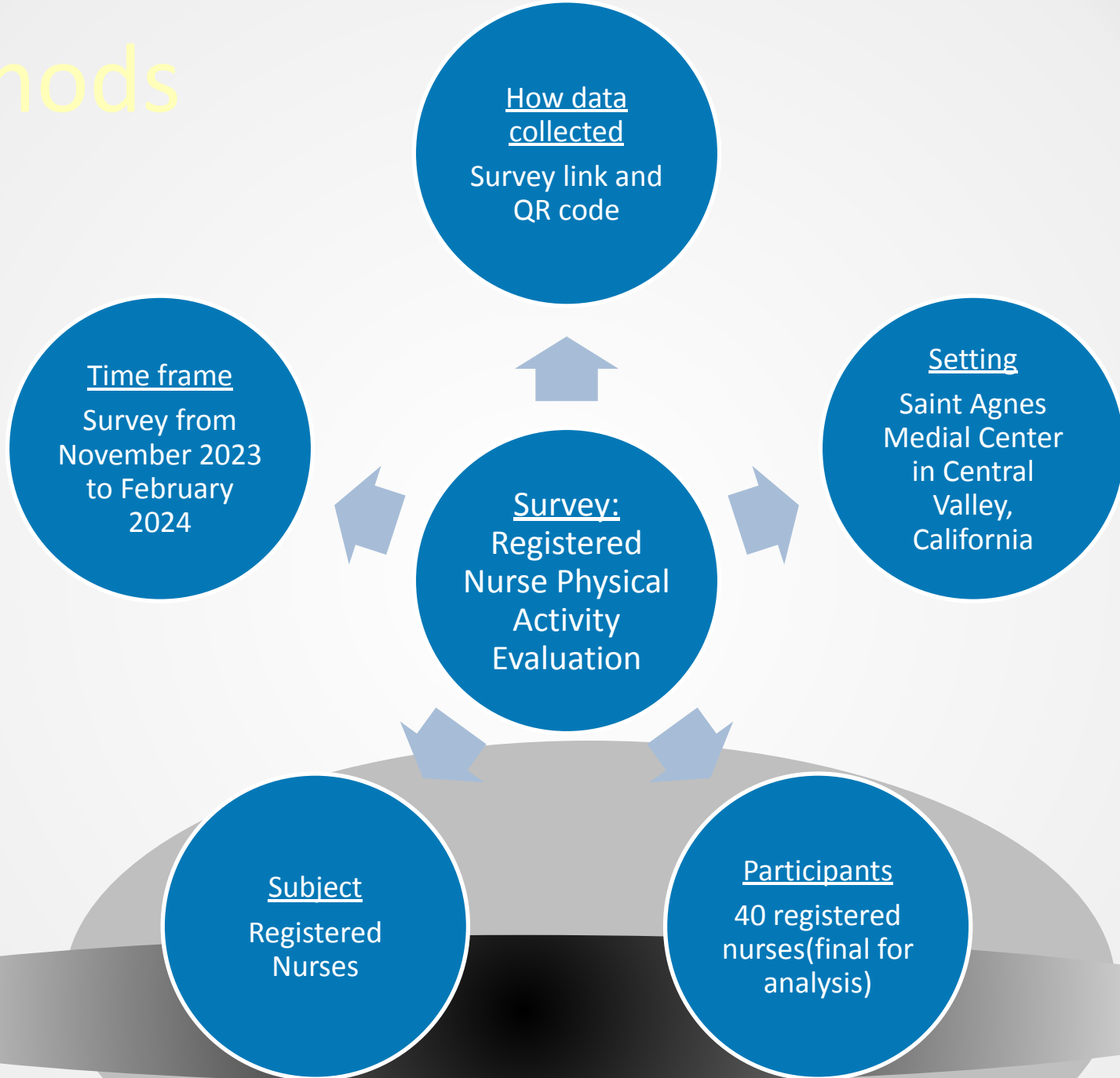
4

Some nurses' occupational physical activities exceed current physical activity recommendations.  
Chappel et al. (2017)

## Identify research gap:

How to differentiate nurses' accumulation of occupational physical activity at work from being physically healthy is poorly understood and understudied.

# Methods



# Sections of the survey

total 50 questions

1

Demographics information

2

Lifestyle satisfaction level

3

Past and Current physical activity level

4

Perceived barriers to exercise on a regular basis

5

Possible strategies that Saint Agnes, as an employer, could assist





# Examples of the survey

## Past Physical Activity Level – 12 months ago to 3 months ago

13. Predominantly, during your **past**: How would you rate your **lifestyle**?

1. Mostly Sedentary
2. Somewhat Sedentary
3. Mostly not Sedentary
4. Not Sedentary at all

14. Predominantly, during your **past**: How would you rate

1. Rarely met recommended levels
2. Occasionally met recommended levels
3. Usually meet recommended levels
4. Consistently exceeded recommended levels

15. Predominantly, during your **past**: How would you rate **Level**?

1. Rarely met recommended levels
2. Occasionally met recommended levels
3. Usually meet recommended levels
4. Consistently exceeded recommended levels

Next section ...

## Potential Solutions to Barriers

The next set of questions are aimed at looking at potential solutions to lessening the barriers that Registered Nurses have with achieving the recommended level of Physical Activity.

39. How likely would you participate in a Wellness Program at Saint Agnes Medical Center if the expenses were tax deductible?

1. Extremely likely
2. Very likely
3. Slightly likely
4. Not at all likely

40. What kind of services do you think if offered by Saint Agnes Medical Center could motivate you to participate in physical activity? Select all that you would be interested in.

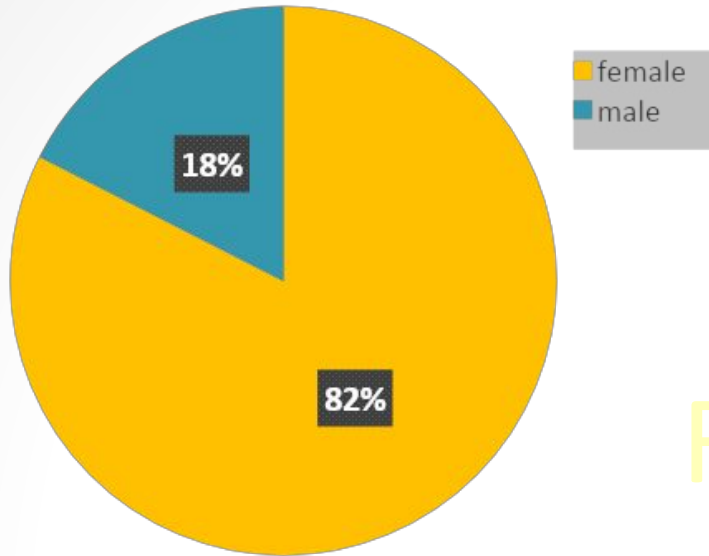
1. Acupuncture
2. Chiropractor
3. Massage
4. Nutrition consultation
5. On-site Gym
6. Yoga
7. Pilates
8. Exercise Classes
9. Walking teams
10. Personal trainer
11. None
12. Fill in

41. How likely would you use an app downloaded to the Zebra (the new phone we use for Epic) to remind you to initiate a stretch or stand-up and walk breaks.

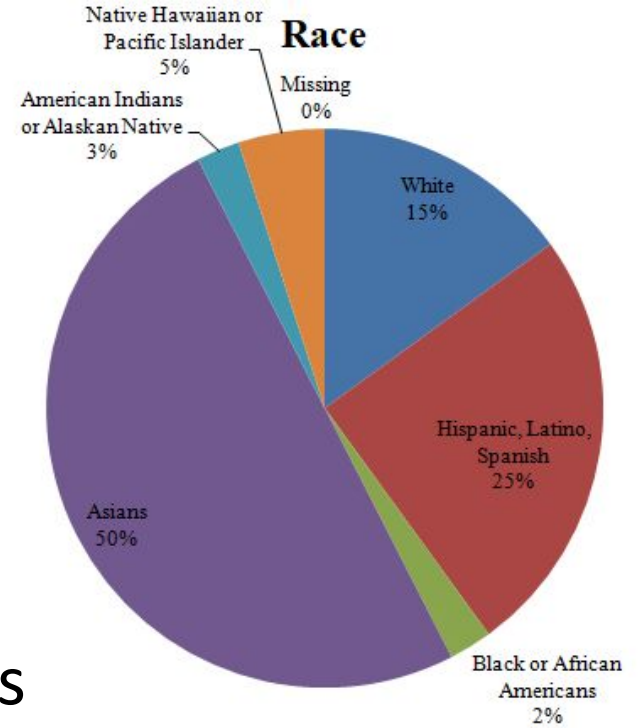
1. Extremely likely
2. Very likely
3. Slightly likely
4. Not at all likely



## Gender



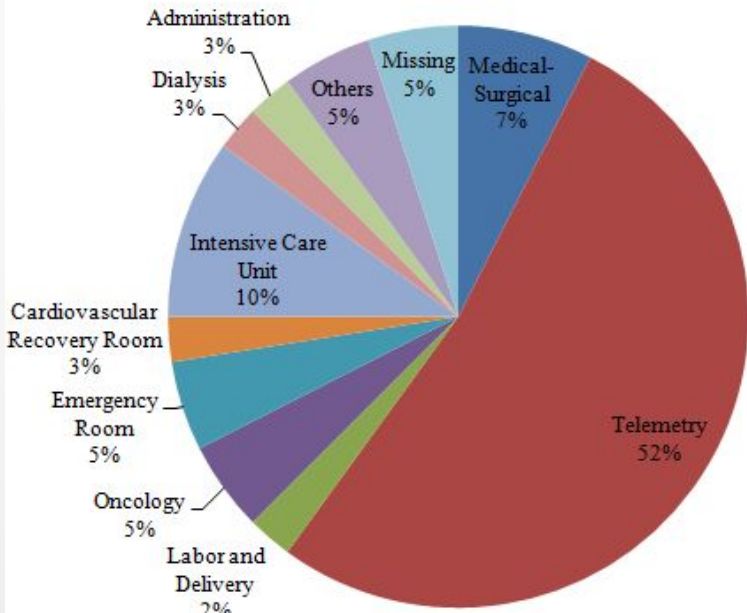
## Race



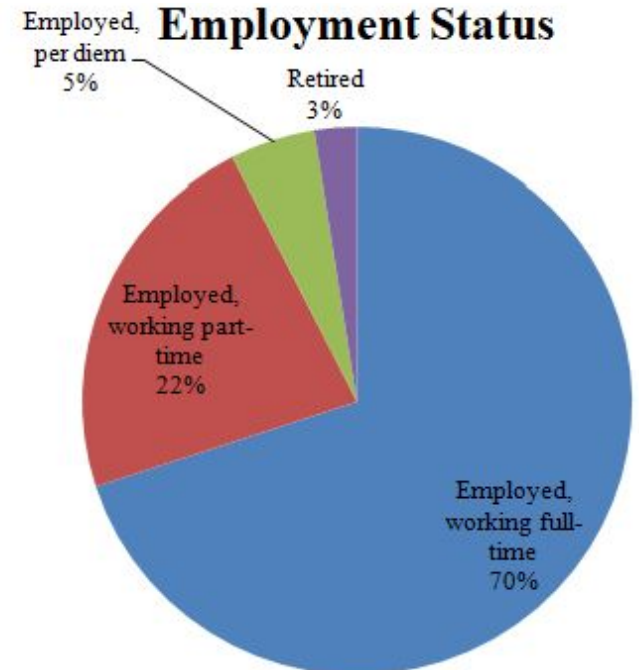
# Result

## Demographics

## Department



## Employment Status



# Results

1

Participants were asked to respond to survey items about their satisfaction levels.

- Participants have moderate satisfaction on work-life balance ;
- Patient satisfaction and providing the best care were important.
- Participants experience being stressed at work occasionally too often.

	N	M	SD	Min	Max
Satisfaction Level	40	2.7	0.723	1	4
Work-Life Balance	40	2.75	0.543	2	4
Importance of Patient Satisfaction	40	3.325	0.656	2	4
Importance of Providing Best Care	40	3.775	0.423	3	4
Frequency of Being Stress at Work	40	2.675	0.797	1	4

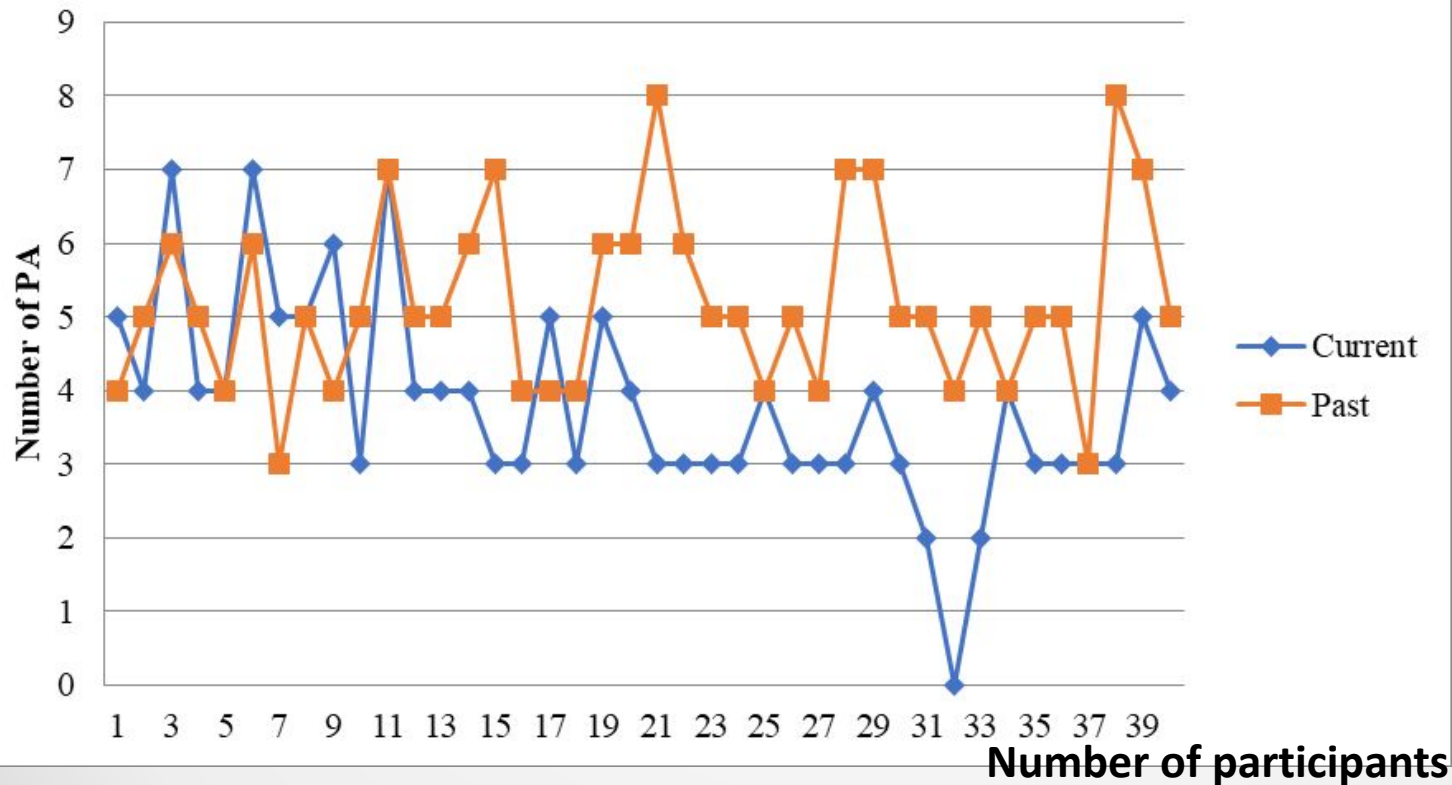
**Table 1** Descriptive Statistics of Satisfaction Level Items (N = 40)

# Results

2

Participants were asked to respond to survey items about their past and current physical activities

## Current vs Past Physical Activities



**Table 2** Line graph Current and Past Physical Activities(PA: physical activity)

# Results

3

the satisfaction level is negatively correlated with the total emotional barriers and the total barriers score.

**Table 3** Spearman's Correlation Analysis of Satisfaction Level, Past and Current Physical Activities, and Barriers

Variable		Satisfaction Level	Current Physical Activities	Past Total Physical Activities	Total Emotional Barriers	Total Physical Barriers	Total Barriers
1. Satisfaction Level	Spearman's rho	—					
	p-value	—					
2. Current Physical Activities	Spearman's rho	-0.081	—				
	p-value	0.617	—				
3. Past Total Physical Activities	Spearman's rho	0.065	0.027	—			
	p-value	0.69	0.869	—			
4. Total Emotional Barriers	Spearman's rho	-0.438	0.081	-0.118	—		
	p-value	0.005	0.618	0.469	—		
5. Total Physical Barriers	Spearman's rho	-0.04	0.078	-0.098	0.191	—	
	p-value	0.806	0.63	0.548	0.238	—	
6. Total Barriers	Spearman's rho	-0.375	0.076	-0.111	0.936	0.483	—
	p-value	0.017	0.642	0.496	< .001	0.002	—

# Results

- 4 The results indicated that participants' likelihood to participate in the physical activity program was not significantly correlated with their current and past physical activities( $p > .05$ ).

Variable		Current Physical Activities	Past Total Physical Activities
1. Current Physical Activities	Spearman's rho	—	
	p-value	—	
2. Past Total Physical Activities	Spearman's rho	0.027	—
	p-value	0.869	—

**Table 4** Spearman's Correlation Analysis of Current and Past Physical Activities and Potential Solutions

# Results

- 5 This indicated that participants are somewhat likely to extremely likely to participate in the physical activity program at workplace, if incentives and get paid as part of normal shift were offered.

**Table 5** Descriptive Statistics of Potential Solutions (PA: physical activity)

	N		M	SD	Min	Max
Tax deductible for PA	40		4.125	0.911	1	5
Use app Zebra	40		3.475	1.132	1	5
Gym membership	40		4.15	0.975	1	5
Exercise facilities-SAMC	40		4.2	0.992	1	5
Exercise specialty	40		4.075	0.944	1	5
PA Club	40		4.15	0.802	2	5
Virtual PA Club	40		3.825	1.01	1	5
Walking Path	40		4	0.934	1	5
Walking Club	40		3.8	1.018	1	5
Financial Incentive	40		4.35	0.921	1	5
PA program - Paid Shift	40		4.2	0.883	1	5

6

The results also showed that all potential solutions are significantly correlated with each other ( $p < .05$ ).

# Results

Variable		Satisfaction Level	Tax deductible for PA	Use app Zebra	Gym membership	Exercise facilities-SAMC	exercise specialty
1. Satisfaction Level	Spearman's rho	—					
	p-value	—					
2. Tax deductible for PA	Spearman's rho	-0.204	—				
	p-value	0.206	—				
3. Use app Zebra	Spearman's rho	0.082	0.645	—			
	p-value	0.615	< .001	—			
4. Gym membership	Spearman's rho	0.205	0.445	0.569	—		
	p-value	0.205	0.004	< .001	—		
5. Exercise facilities-SAMC	Spearman's rho	0.101	0.699	0.659	0.716	—	
	p-value	0.537	< .001	< .001	< .001	—	
6. Exercise specialty	Spearman's rho	0.042	0.592	0.405	0.56	0.749	—
	p-value	0.796	< .001	0.009	< .001	< .001	—

**Table 6** Spearman's Correlation Analysis of Satisfaction Level and Potential Solutions (PA: physical activity)



# Results



More active in the past 12 month than they have within last 3 mons .

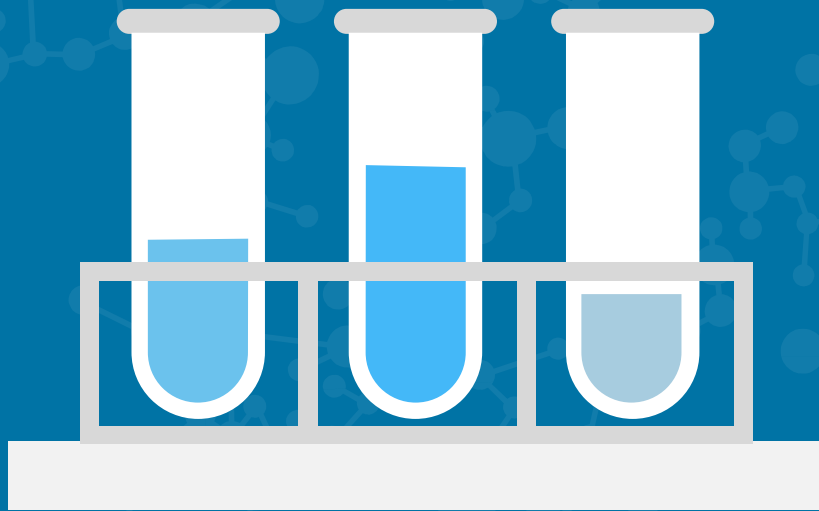
more emotional barriers and total barriers, lower satisfaction levels of work-life balance.

likelihood to participate in the physical activity program correlated with satisfaction levels of work-life balance.

likelihood to participate in the physical activity program correlated with current and past physical activities.

likelihood to participate in the physical activity program correlated with if gym membership discount or other incentives that offered

# Limitations



01

Small sample

02

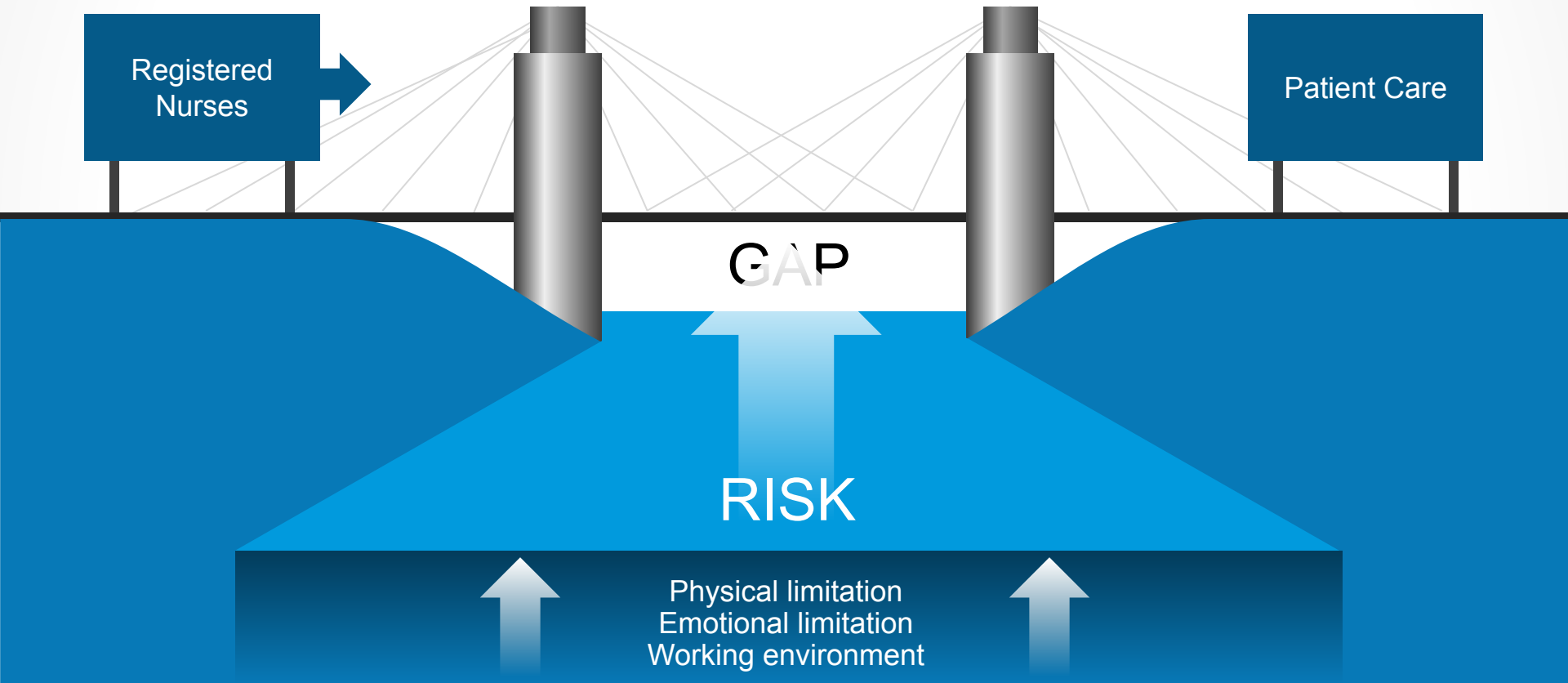
Self-report

03

A lack of representation in other healthcare settings or different geographic locations.

# Discussion or Outcomes

The significance of management support in wellness fitness programs



# Conclusions

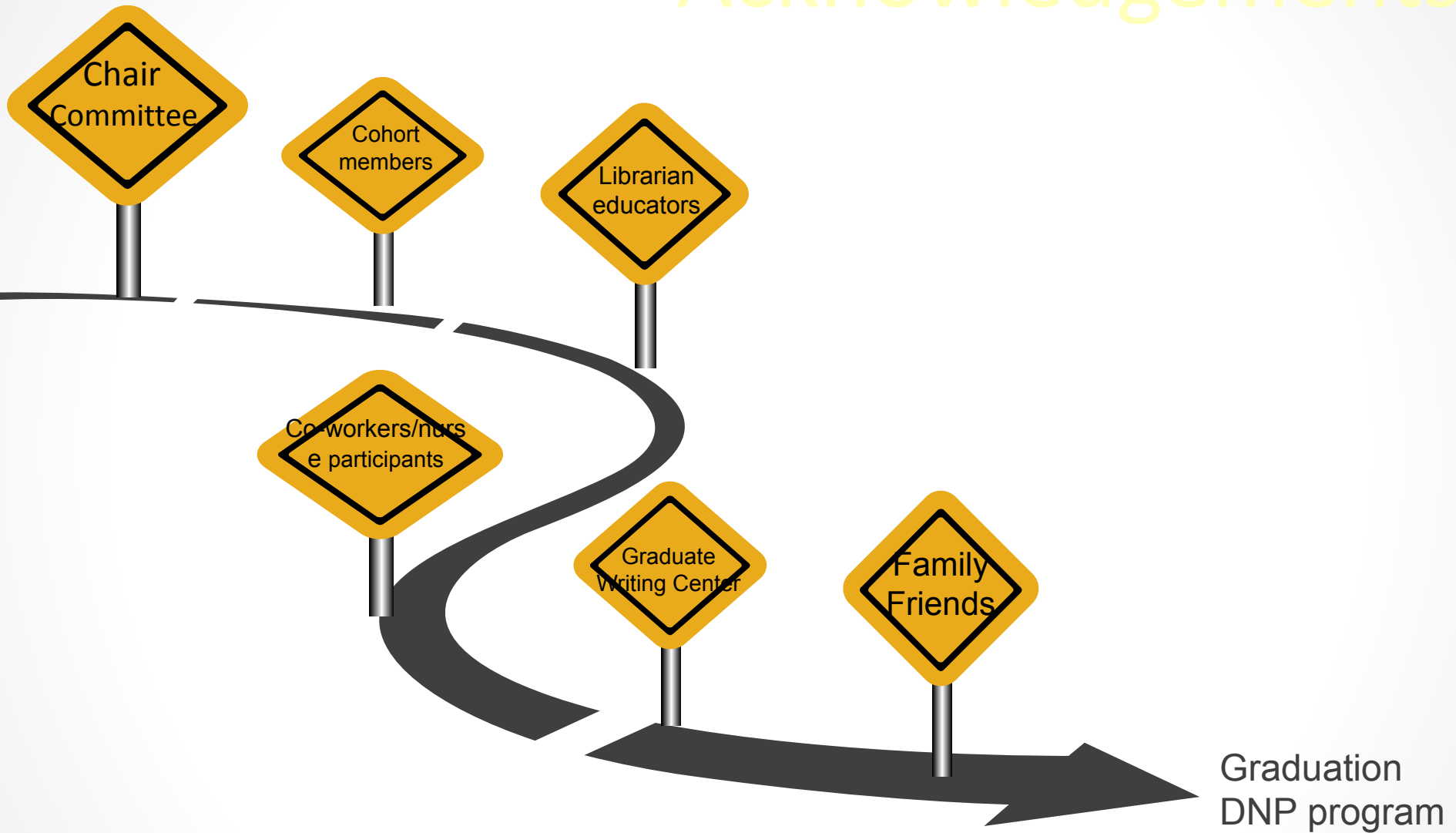
Lack of physical activity among registered nurses continues to be a challenge in healthcare.



Registered nurses felt compelled to participate in on-site health promotion activities

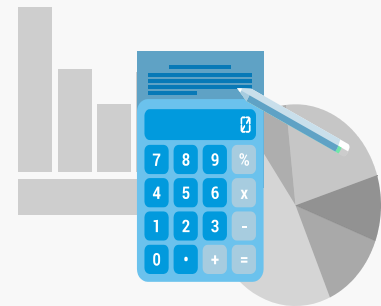
A written proposal of quality improvement will be provided to St Agnes Medical Center with supportive data.

# Acknowledgements



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- Thank you  
for listening!

