

# PROMOTING BONE HEALTH THROUGH UTILIZATION OF A NURSE LED PROTOCOL

This project is in partial fulfillment of the degree requirements for the Doctor of Nursing Practice at Touro University Nevada

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## **ABSTRACT**

Osteoporosis is a preventable chronic condition defined as low bone density with bone microarchitecture deterioration resulting in an increased risk of fragility fractures, mortality, morbidity, and financial burden. Weight-bearing exercises and osteoprotective behavior modification can improve bone mineral density and reduce fragility fractures but deficits in the identification of atrisk patients have hindered efforts to intervene.

### INTRODUCTION

Osteoporosis: Most prevalent bone disease among older adults (Sabin & Sarter, 2014). It is preventable (through modifiable risk factors) (Kling, Clarke, & Sandhu, 2014). Inadequate screening = late detection = increased morbidity.

Osteoporosis results from bone density loss and causes fragility fractures (Kling, Clarke, & Sandhu, 2014).

It is a silent disease until a fragility fracture occurs-50% risk thereafter for subsequent fracture (French & Emanuele, 2019).

Prevalence in postmenopausal women due to the retraction of estrogen (1 in every 2 women) (Daly et al., 2019)

## MATERIALS & METHODS

Facts on Osteoporosis Quiz (FOOQ)
Novel four question Likert-like survey
Novel EHR osteoporosis tool
Educational materials (PPT, etc.)
FOOQ: Pre- and Post- survey results:
Paired sample doubled-tailed t-test
(p=0.05)

Likert-like survey: Paired sample doubled-tailed t-test (p=0.05)

DEXA ordering: Fischer's exact test of

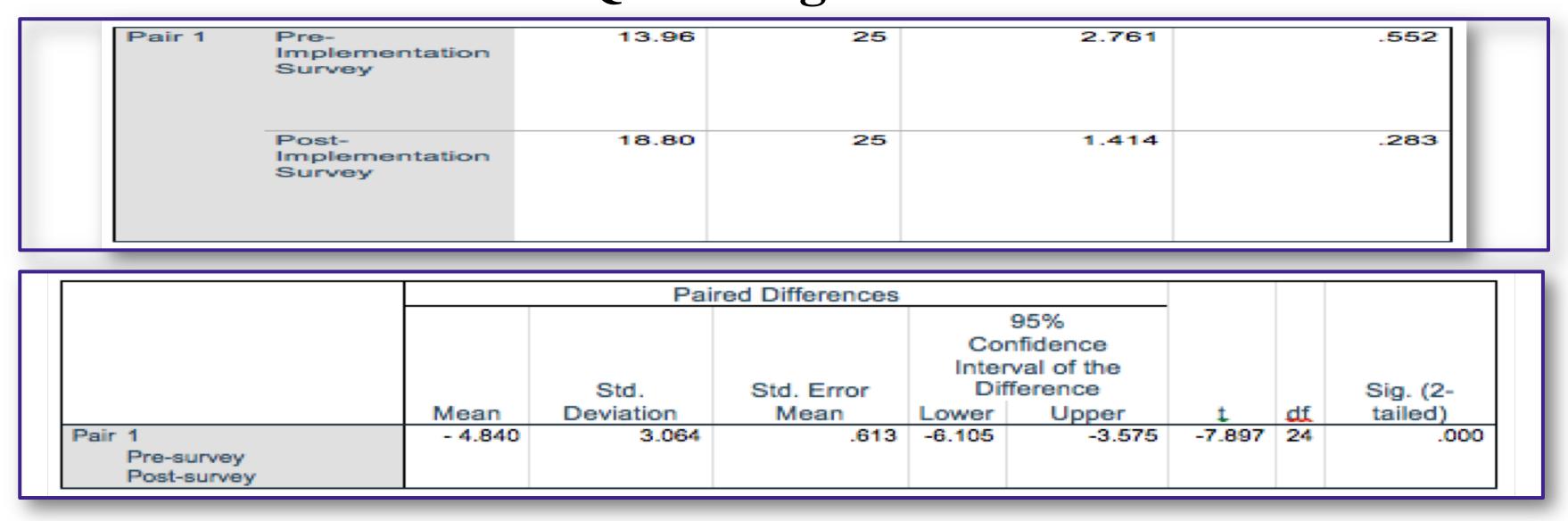
DEXA ordering: Fischer's exact test of independence (p=0.05)

Data analyzed using SPSS version 25, StatPlus Excel plug-in

#### RESULTS

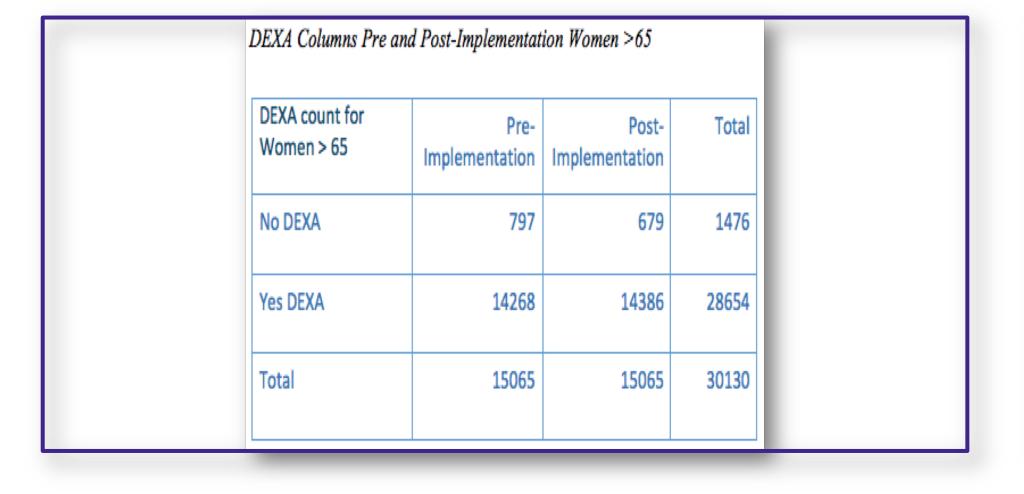
- The nurses participating in the project significantly improved on the FOOQ
- The opinions of the nurses involved in the project significantly improved
- DEXA ordering significantly increased for female patients > 64 years old
- DEXA scan ordering increased for female patients 50-64 years of age but the increase was not statistically significant.

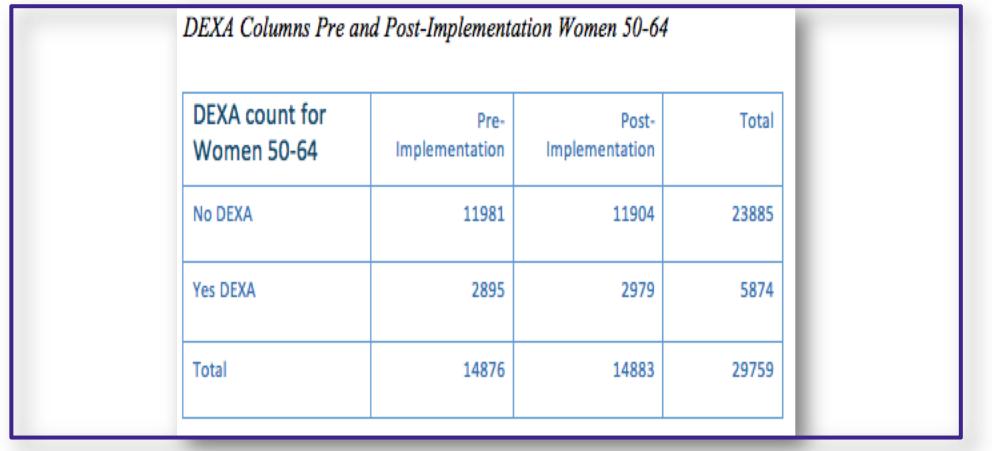
# **FOOQ Scoring**



The data above indicate that there was an increase in total score between the pre-survey as 13.96 (mean) and post-survey (18.80 (mean).

# **DEXA Ordering**





- The nurses participating in the project significantly improved on the FOOQ
- The opinions of the nurses involved in the project significantly improved
- DEXA scan ordering increased for female patients 50-64 years of age but the increase was not statistically significant

# Challenges

COVID 19 was a challenge-patient's were reluctant to undergo nonemergency testing due to the shelter at home recommendations. Increased volume of Covid-19 related calls and e-mails inundated the department, straining all resources.

# DISCUSSION

## **Conclusions**

Strategies for osteoporosis prevention are both cost-effective, increase efficacy, and promote healthy bones (identification and modifications of modifiable osteoporosis risk factors).

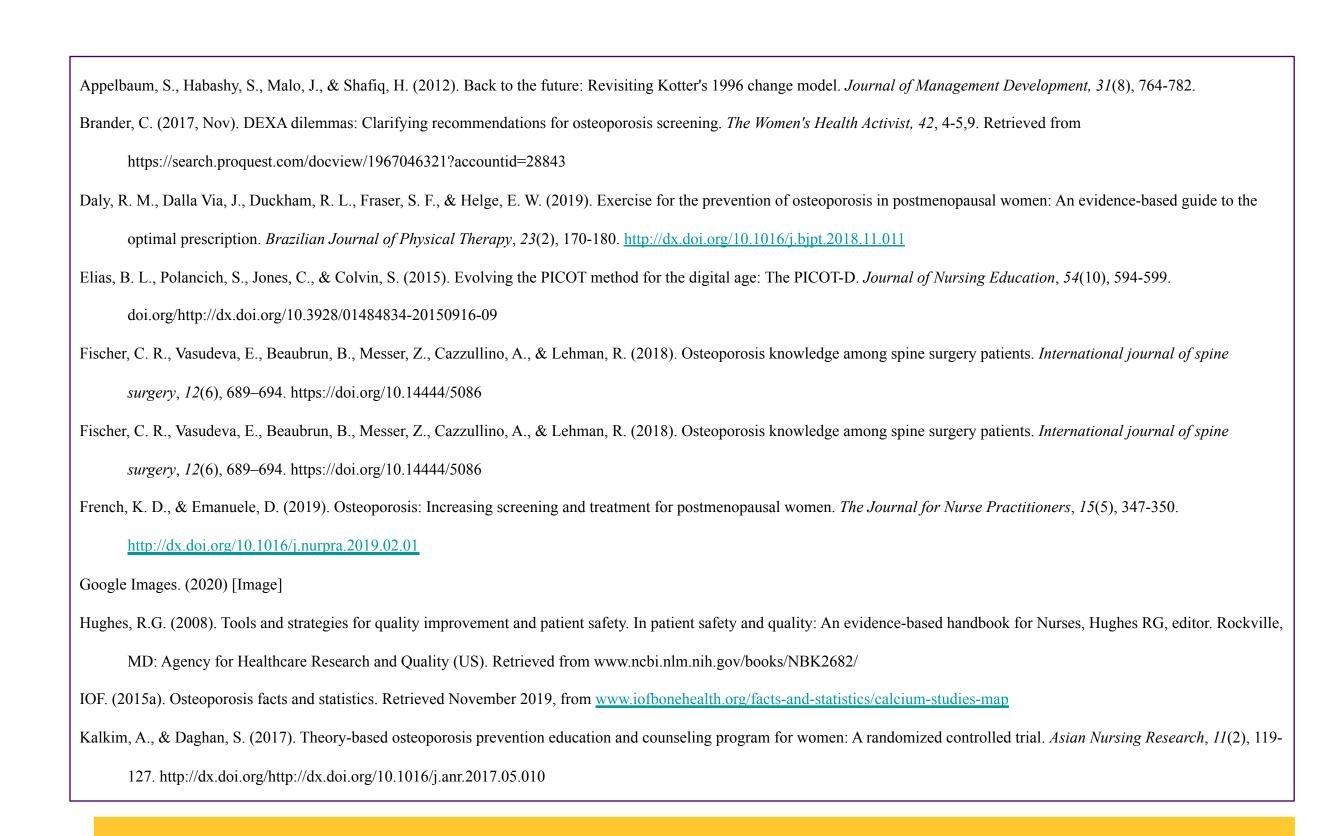
#### Limitations

Use of a non-random sampling plan-only the Telehealth nurses at a single location were able to participate in the project increased the risk of selection bias

#### **Future Directions**

Future research questions: Do recommendations made by Telehealth nurses translate into healthy bones?

## REFERENCES



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