

Is Anxious More Painful? Correlation Between Function and Pain Scores and the Anxiety Levels Before Primary Hip and Knee Arthroplasty

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Introduction

- Hip and Knee arthroplasties are of the most common surgeries being done around the world.
- Osteoarthritis is the most common indication.



Introduction

- The relationship between body and soul or state of mind has become a consensus.
- "Stress" is a risk factor for almost any illness
- Two components of anxiety-
 - State
 - Trait



Spielberger CD



Introduction

- Feeney SL, McDonald S, Hetrick SE et al
 - The relationship between pain and negative affect in older adults: anxiety as a predictor of pain
- Badura-Brzoza K, Zajac P, Brzoza Z. et al.
 - Psychological and psychiatric factors related to health-related quality of life after total hip replacement: a preliminary report



Goals/Questions of the study

- Pre-operative assessment in different preoperative occasions
- Is there a correlation between the components of anxiety and the pain and functional assessment?



Materials and methods

- 2009-2011
 - Prospective
 - Patients referred to Hip and Knee Arthroplasty
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- "Hadassah" Medical Center.



Materials and methods

- 191 patients
 - 104 and 87 consecutive patients who were referred to Hip and Knee replacement surgery (THA and TKA), respectively.

- 151 continued F/U
 - 79 THA
 - 72 TKA



Materials and methods

- **Each patient filled out 4 questionnaires:**
 - Demographic questionnaire
 - Visual Analogue Pain Intensity Scale (VAS)
 - Oxford Hip or Knee Score questionnaire
 - State-Trait Anxiety Inventory



Materials and methods

- **The Oxford and the anxiety questionnaires were filled out on 3 different occasions:**
 - at the clinic, during the referral to the surgery
 - at the patient's home, 2-3 weeks after the referral to the surgery
 - 1 day prior to the surgery, at admission



Results

Oxford scores at 3 different Preoperative time points

	N	Mean	Std. Deviation
Oxford-Clinic	98	19.87	8.076
Oxford-Home	98	19.18	8.688
Oxford-Admission	98	19.14	9.001

*Descriptive statistics



Results

	N	Mean	Std. Deviation
Anxiety-S Clinic	84	20.20	5.392
Anxiety -S Home	84	18.68	5.554
Anxiety -S Admission	84	17.27	5.335

Sig.	F	Mean Square	df	Type III Sum of Squares	
.000	13.417	180.206	2	360.413	Sphericity Assumed
p<0.0001	13.417	187.357	1.924	360.413	Greenhouse-Geisser

*ANOVA with repeated measures



Results

Correlation between functional level at the clinic (according to the oxford score) and the anxiety level

	Anxiety State in clinic	Anxiety Trait in clinic
Pearson Correlation	-.267**	-.104
Sig. (2-tailed)	.001	.219
N	142	140

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Correlation between functional level at Home (according to the oxford score) and the anxiety level

	Anxiety State in Home	Anxiety Trait in Home
Pearson Correlation	-.234*	-.087
Sig. (2-tailed)	.014	.370
N	109	107

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Correlation between functional level at Admission (according to the oxford score) and the anxiety level

	Anxiety State in clinic	Anxiety Trait in clinic
Pearson Correlation	-.318**	-.034
Sig. (2-tailed)	.000	.707
N	127	128

** . Correlation is significant at the 0.01 level (2-tailed).



Results

- No change when using gender based analysis
- No change when using Joint specific analysis.



Discussion

- Currently, preoperative assessment admission is usually performed at admission.
- Hypothesis: Subjective assessment of function and pain level will change at different times prior to the surgery.
- This study's findings couldn't support its hypothesis.

Discussion

- Trend of decrease in the Anxiety level
- No clear clinical significance due to only light changes.
- Statistical significant correlation between the Oxford scores and the STAI-S scores at each of the 3 time points.



Discussion

- No statistical correlation between the patients' pains (VAS score) and the level of anxiety, both State and Trait.
- No change was found when we used gender based analysis nor Joint specific analysis.



Conclusion

- There is no need to change the present custom of pre-operative assessment at admission.



Thank you for your attention...



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