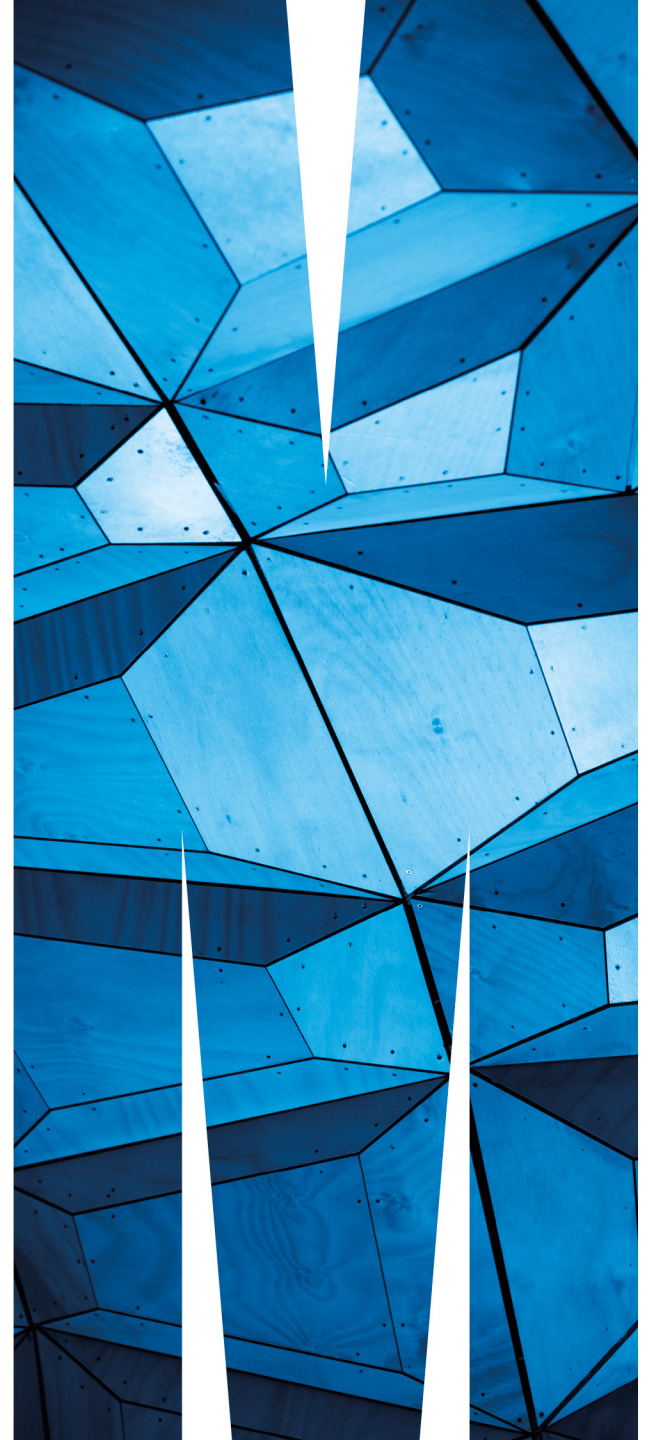


Exploring the role of preoperative telephone support on symptoms of anxiety, depression, pain and QOL post total knee replacement (TKR)

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- Ageing population
- Arthritis and osteoarthritis
- Treatment – total joint replacement (TJR)
- Anxiety and Depression and Pain
- Telephone support

Statement of Research Question

Does **pre-operative** telephone support reduce post-operative symptoms of anxiety, depression and pain, and improve QOL post total knee replacement (TKR)?

Pre and post test

PROMS - questionnaires

- EQ5D
- K10
- NRS-Pain

Telephone support – semi structured script

- Open and closed questions

Ethics approval obtained

- Recruitment Pre-Admission Clinic (PAC)
- Questionnaires – Baseline
6 weeks post TKR
- Telephone support – 1 week after PAC
within 1 week of surgery

Quantitative

➤ SPSS V.23 –

Descriptive/Inferential analysis

➤ Mean and SD

➤ Median when results not normally distributed

Qualitative

Content analysis

Results – Participant demographics

No. participants n=16

Age M= 64.3 years (SD \pm 10.97)

Gender Female n=11 (69%)

Male n=5 (31%)

Results – Participant demographics

Living alone n=3 (19%)

Most participants n=13 (81%)

- Living with partner or
- partner & children or
- children

Results - Comorbidities

	Participants (n=16)	%	Frequency
Cardiovascular	7	44	10
Respiratory	5	31	6
Endocrine	3	19	6
Musculoskeletal	16	100	19
Gastrointestinal	8	50	9
Cancer	2	13	3
CNC/Neurological	2	13	2
Anxiety and /or Depression	5	31	7
Total			62

Anxiety and Depression - EQ5D

Level of anxiety / depression

	Baseline n (%)	Six weeks post TKR n (%)
Not anxious or depressed	9(56)	12(75)
Slightly anxious or depressed	3(19)	3(19)
Moderately anxious or depressed	3(19)	1(6)
Severely anxious or depressed	1(6)	0(0)
Extremely anxious or depressed	0(0)	0(0)
Total	16(100)	16(100)

EQ5D index scores

	Baseline	Six weeks post TKR	Mean difference	p	Effect size
EQ5D	0.54	0.70	0.16	0.008	0.37
EQVAS (0 – 100)	68.88	75.94	7.06	0.198	0.199

Anxiety and Depression – K10

	Baseline	Six weeks post TKR	Mean difference	p	Effect size
K10 (10 – 50)	18.47	18.00	-0.47	0.75	0.036

Pain - EQ5D

Level of pain / discomfort

	Baseline n (%)	Six weeks post TKR n (%)
No pain	0(0)	1(6)
Slight pain	6(38)	10(63)
Moderate pain	5(31)	5(31)
Severe pain	4(25)	0(0)
Extreme pain	1(6)	0(0)
Total	16(100)	16(100)

NRS-Pain

	Baseline	Six weeks post TKR	Mean difference	p	Effect size
NRS-Pain (0 – 10)	4.91	2.25	-2.66	< 0.001	0.553

Rehabilitation (IPR) vs Home

- EQ5D index Home M= 0.77 IPR M = 0.63
- NRS-Pain Home M=1.31 IPR M=3.31
- K10 Home M=16.78 IPR M=19.38

Result shows better outcome scores for Home vs IPR

Length of stay (LOS)

- not normally distributed.
- Median LOS 4 days (IQR=3-5.5)

Content Analysis - Themes

Admission preparation

Anxiety about surgery

Post surgery concerns

Benefits of telephone support;

- Simple cost effective tool
- Questions were answered and concerns discussed
- Education provided
- Link to the hospital, so participants felt connected
- Participants valued telephone support.

- Significant improvement QOL and pain post TKR
- Small improvement in anxiety and depression
- Compared to reference values in the literature, further improvement in QOL and pain was seen.

- Follow up 6 weeks
- Reduced recruitment
- Single centre

Randomised Controlled Trial

- Comparing pre-operative telephone
- Identify those groups more at risk
- Compare HRQOL, pain, anxiety and depression

Conclusion

- Telephone support calls filled the gaps
- Participants **valued** telephone support
- Significant improvement in **pain and EQ5D index scores (QOL)**
- Anxiety and depression also reduced
- Comparing reference values in the literature there was an **improvement** in mean scores for NRS-Pain and EQ5D index scores.
- Suggesting telephone support calls had a positive effect on outcomes following TKR.

Australian Bureau of Statistics [ABS]. (2015). *National health survey 2014-2015*. Retrieved from [http://www.ausstats.abs.gov.au/Ausstats/subscriber.nsf/0/CDA852A349B4CEE6CA257F150009FC53/\\$File/national health survey first results, 2014-15.pdf](http://www.ausstats.abs.gov.au/Ausstats/subscriber.nsf/0/CDA852A349B4CEE6CA257F150009FC53/$File/national%20health%20survey%20first%20results%202014-15.pdf).

Ayers, D., Franklin, P., Trief, P., Ploutz - Snyder, R., & Freund, D. (2004). Psychological attributes of pre-operative total joint replacement patients. *The Journal of Arthroplasty*, 19(7), 125 - 130.

Barton, B., & Peat, J. (2014). *Medical statistics: A Guide to SPSS, data analysis and critical appraisal*. UK: John Wiley & Sons Ltd.

Duivenvoorden, T., Vissers, M., Verhaar, J., Busschbach, J., Gosens, T., Bloem, R., . . . Reijman, M. (2013). Anxiety and depressive symptoms before and after total hip and knee arthroplasty: A prospective multicentre study. *Osteoarthritis & Cartilage*, 21, 1834 - 1840.

Franklin, P., Rosal, M., Li, W., Oatis, C., & Ayers, D. (2012). *Can telephone support during post-TKR rehabilitation improve post-op function: A randomized controlled trial*. Paper presented at the American Academy of Orthopaedic Surgeons.

Hawker, G., Mian, S., Kendzerska, T., & French, M. (2011). Measures of adult pain. *Arthritis Care & Research*, 63(S11), S240–S252.

Hordam, B., Sabroe, S., Pedersen, P., Mejdahl, S., & Soballe, K. (2009). Nursing intervention by telephone interviews of patients aged over 65 years after total hip replacement improves health status: A randomised clinical trial. *Scandinavian Journal of caring Science*, 10, 94 - 100.

Johansson, K., Katajisto, J., & Salanterä, S. (2010). Pre-admission education in surgical rheumatology nursing: Towards greater patient empowerment. *Journal of Clinical Nursing*, 19, 2980 - 2988.

Polit, Beck, & Hungler. (2001). *Essentials of nursing research; Methods, appraisal, and utilization* (5 ed.). Philadelphia: Lippincott.

Reference

Reenen, M., & Janssen, B. (2015). *EQ5D-5L user guide* (pp. 1 - 28). Retrieved from http://www.euroqol.org/fileadmin/user_upload/Documenten/PDF/Folders_Flyers/EQ-5D-5L_UserGuide_2015.pdf

Rolfson, O., Dahlberg, L. E., Nilsson, J., Malchau, H., & Garellick, G. (2009). Variables determining outcome in total hip replacement surgery. *The Journal of Bone & Joint Surgery*, 91-B(2), 157 - 161.

Van Egmond, J., Verburg, H., & Mathijssen, N. (2015). The first 6 weeks of recovery after total knee arthroplasty with fast track *Acta Orthopaedica*, 86(6), 708–713

Wooden, M. (2009). *Use of the Kessler Psychological Distress Scale in the HILDA Survey*.

Retrieved from

https://www.melbourneinstitute.com/downloads/hilda/Bibliography/HILDA_Discussion_Papers/hdps209.pdf.