**Poster Presentations :Osteoarthritis**

SAT0452 Do Traditional Risk Factors for Knee Osteoarthritis Predict Pain Flares in Knee Osteoarthritis?

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**Abstract**

**Background** Knee pain is the main cause of disability and reduced function in knee osteoarthritis (KOA). Though knee pain in osteoarthritis was previously perceived as a chronic condition it is now established that KOA pain fluctuates.There is emerging evidence that time variant risk factors-such as knee injury, buckling and mood- are associated with knee pain flares. But, it is not known whether conventional risk factors associated with KOA – age, gender, body mass index-are associated with pain flares in KOA.

**Objectives** This study examines whether conventional time invariant risk factors for KOA and baseline pain felt by the patient are associated with KOA pain flares.

**Methods** Study participants were selected from a 3-month web-based longitudinal follow up study developed to identify risk factors for KOA pain flares. Participants were requested to complete online questionnaire at days 0, 30, 60 and 90 (control period assessment points) and at time points whenever they experienced knee pain flare (case period assessment points) during the follow up period. A KOA pain flare was defined as current pain with a greater than 2 point increase (on a 0–10 point numeric rating scale) from the mildest KOA pain intensity reported at day 0.

The association of pain flares with traditional risk factors for knee osteoarthritis -gender, weight, height, body mass index- was assessed by negative binomial regression. The duration of knee osteoarthritis, baseline pain intensity (lowest pain and highest pain scores at baseline) were similarly evaluated. The best explanatory variable was decided by forward selection.

**Results** 345 persons (61.2% females) with multiple KOA pain flares were selected. Their mean age was 62.1years (SD ±8.2). The mean body mass index was 29.8kg/m2 (SD ±6.5). The participants rated their baseline pain (on a numeric rating scale) as being 4.41 (SD± 2.02) and their worst pain as being 7.91 (SD ±1.74).

An average of 1.92 (SD 2.59) flares were documented during the 3-month period. The levels of baseline pain – usual and worst pain felt at baseline- were the only parameters significantly associated with KOA pain flares ([Table 1](http://ard.bmj.com/content/75/Suppl_2/835.2#T1)).

**Table 1.**

**Association between time invariant risk factors of KOA and KOA pain flares**

|  | **Incidence rate ratio (95% CI)** | **P value** |
| --- | --- | --- |
|  | | |
| Age | 0.99 (0.98–1.01) | 0.99 |
| Female gender | 0.87 (0.65–1.16) | 0.35 |
| Height | 0.99 (0.98–1.01) | 0.76 |
| Weight | 1.00 (0.99–1.01) | 0.16 |
| Body mass index | 1.02 (0.99–1.04) | 0.08 |
| Duration of knee osteoarthritis | 0.99 (0.98–1.00) | 0.49 |
| Baseline pain score – lowest level of pain intensity | 1.25 (1.17–1.34) | <0.001 |
| Baseline pain intensity – highest pain intensity felt at baseline | 1.29 (1.18–1.40) | <0.001 |

* **CI: Confidence Interval.**

**Conclusions** The baseline pain scores were the strongest predictors of pain flares of knee osteoarthritis. The traditional risk factors associated with knee osteoarthritis did not usefully predict pain flares. The traditional time invariant risk factors may not be associated with short term variability in pain though they are associated with long term outcomes of knee osteoarthritis. It is postulated that as knee pain is already present, time invariant risk factors that contributed to the original symptom causation are not associated with pain flare.

**Acknowledgement** Joanna Makovey, Ben Metcalf, Lyn March and Kim Bennell

**Disclosure of Interest** None declared

<http://dx.doi.org/10.1136/annrheumdis-2016-eular.3335>