how previous results can be generalized to other populations with different lifestyle and physical activity habits. 

**Objectives:** To investigate if knee OA is associated with lower physical activity in a general middle-aged Dutch population. Furthermore, to investigate the association of physical activity with patient reported outcomes such as knee pain and function, and health-related quality of life in individuals with knee OA.

**Methods:** We used cross-sectional data from the Netherlands Epidemiology of Obesity (NEO) study, in which participants aged 45-65 years were included. Clinical knee OA was defined using the ACR criteria. Structural knee OA was defined on MRI using the modified criteria by Hunter et al. in a random subset of 1,285 individuals of our study population.

We assessed knee pain and function with the Knee injury and Osteoarthritis Score (KOOS), and health-related quality of life (HRQoL) with the Short Form (SF)-36. Physical activity (in Metabolic Equivalent of Task (MET) hours per week) was assessed using the Short Questionnaire to Assess Health-enhancing physical activity (SQASH).

We used linear regression analyses to investigate 1) the association of knee OA with physical activity, and 2) of physical activity with knee pain, function, and HRQoL in participants with clinical knee OA. All analyses were adjusted for age, sex, body mass index (BMI), ethnicity, educational level and comorbidities. To account for possible information bias, we performed a sensitivity analysis to assess the association between clinical knee OA and physical activity measured by an accelerometer in a random subset of 15% of the study population.

**Results:** Of 6,212 participants, we observed clinical knee OA in 14%, and structural knee OA in 12%. The general population characteristics and median physical activity of our study population are presented in Table 1. In comparison to participants without knee OA, participants with clinical knee OA had on average 9.60 (95% CI 3.70;15.50) MET hours per week more total physical activity (Figure 1). Structural knee OA was associated with 3.97 (-7.82; 15.76) MET hours per week more physical activity, compared with no structural knee OA.

Sensitivity analysis showed a weak positive association of clinical knee OA with physical activity measured by an accelerometer; 2.37 (-6.05; 10.80) MET hours per week more physical activity in participants with clinical knee OA, compared with participants without clinical knee OA.

In the subpopulation of participants with clinical knee OA, physical activity was not associated with knee pain, function, or HRQoL.

**Conclusion:** Knee OA was not associated with lower physical activity in this middle-aged Dutch population. This contrasts previous findings and warrants caution when generalizing physical activity outcomes to other populations. Furthermore, to investigate the association of physical activity with patient reported outcomes such as knee pain and function, and health-related quality of life in individuals with knee OA.

**Disclosure of Interests:** None declared

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**POS1432**  
**SHORT-TERM RISK OF OSTEOSPOROSIS IN ADULTS TREATED WITH CORTICOSTEROIDS: AN OBSERVATIONAL STUDY**

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**Background:** Exposure to corticosteroids is recognised to increase the risk of osteoporosis.

**Objectives:** Our aim was to evaluate patients’ short-term absolute risk of osteoporosis over the course of their first continuous exposure to corticosteroids.

**Methods:** This was an observational study using UK data from the Clinical Practice Research Datalink. Adult patients were selected if exposed to systemic corticosteroids for any condition and had no prior osteoporosis. Non-exposed adults matched on age, sex, and disease burden were selected from the general population. Patients were followed from their first exposure to corticosteroids to the earlier of 90 days following the end of continuous prescribing or for a maximum of three years. Cohorts were categorised by age (18-42 years, 43-67 and 68-92 years), BMI (underweight, normal overweight, obese and obese+) and gender. Absolute risk rates were calculated for each of these categories.

**Results:** In total, 573,056 exposed patients were matched 1:1 to non-exposed controls. Mean age was 52 years; 57% were female. The mean and median days’ supply were 50.9 and 13 days, respectively. Underweight females aged 68-92 years exposed to corticosteroids had the highest absolute risk of osteoporosis (70.9 per 1000 patient years (PKPY)); in matched non-exposed controls this was 26.6 PKPY. Generally, following their first continuous exposure to corticosteroids, patients taking steroids had greater risk of osteoporosis compared with those in the same age, sex and BMI category never exposed to corticosteroids.

**Conclusion:** Whilst it is understood that exposure to corticosteroids increases the risk of osteoporosis, there are large differences in risk in accordance with age, sex and BMI. Alternatives to corticosteroids are urgently needed.

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**Table 1. Characteristics of the NEO study population**

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>No clinical knee OA</th>
<th>Clinical knee OA</th>
</tr>
</thead>
<tbody>
<tr>
<td>All n = 6,214</td>
<td>86%</td>
<td>14%</td>
</tr>
</tbody>
</table>

**General population characteristics**

<table>
<thead>
<tr>
<th>Age (year)</th>
<th>Male</th>
<th>Female</th>
</tr>
</thead>
<tbody>
<tr>
<td>55.7 (6.0)</td>
<td>55.4 (6.1)</td>
<td>575.5 (5.0)</td>
</tr>
</tbody>
</table>

| BMI (kg/m²) | 26.3 (4.4) | 26.1 (4.3) | 276.5 (5.1) |

| Comorbidities (% present) | 24 | 23 | 32 |

<table>
<thead>
<tr>
<th>Physical activity</th>
<th>Total (MET-hours per week)</th>
<th>118.8 (76.8;155.0)</th>
</tr>
</thead>
</table>

Numbers represent mean (SD) or percentages. *median (25th, 75th percentiles). Abbreviations: OA = osteoarthritis. BMI = Body Mass Index. MET = Metabolic Equivalent of Task.

First Author Year Country Population Mean ±SD Stress Instrument Quality Assessment
Bugańska 2010 Poland N=437 Polish >50y (71%) SF36v2 AXIS: ≥16/20
Coty 2017 USA N=137 German >50y (38%) RCOW AXIS: ≥17/20
Cunha 2016 Portugal N=60 55y ±12y SCL-90 MINORS: 11/16
Goula 2015 Greece N=168 55y ±12y SCL-90 MINORS: 11/16
Latmek 1996 USA N=128 56y SRSS: ≥20/20
Mancuso 2006 USA N=60 RA, N=122 49y ±12y DASS-21: AXIS: ≥10/20
Nyklícek 2015 The Netherlands N=201 57y ±12y DASS-21: AXIS: ≥10/20
Persson 2005 Sweden N=158 52y SCL-90R MINORS: 12/16
Rahim 2018 Malaysia N=189 52y ±11y DASS-21: AXIS: ≥12/10
Rice 2016 Canada N=163 56y ±13y DASS-21: AXIS: ≥12/0
Richter 2018 Germany N=226 49y ±10y ERI: AXIS: ≥12/0
Smith 2002 USA N=93 56y ±13y SCL-90R MINORS: 12/16
Trehane 2007 UK N=134 55y LEiHUS MINORS: 11/16
Turner-Cobb 1998 UK N=134 42y ±8y LEiHUS: MINORS: 12/16
Zautra 1997 USA N=41 55y ±10y ISLE: MINORS: 12/16

BACKGROUND: The literature about the impact of Rheumatoid Arthritis (RA) on mental health is mostly focused on depression and anxiety. Yet, patients can experience stress without depressed mood or anxiety.

OBJECTIVES: To examine the impact of RA on psychological stress excluding depression and anxiety focusing on 3 questions: 1) What is the stress level of RA patients compared to a control group? 2) Which types of stress do RA patients experience? 3) Which are risk factors to develop stress as an RA patient?

METHODS: Four scientific databases, EMBASE, PubMed (including MEDLINE), Web of Science Core Collection and Cochrane Library, were systematically searched from inception until 19/04/2020. Eligible studies included psychological stress in RA patients as outcome. Two reviewers (CV&AVB) independently screened titles and abstracts, and later full texts for eligibility. Full-text screening excluded studies without a separate RA population, with a focus on only anxiety and/or depression or not answering at least 1/3 research questions. Quality was appraised by MINORS/AXIS tools.

RESULTS: From 11 115 potentially relevant studies, 16 studies met the inclusion criteria (Table 1). Remarkably, 13 different stress measurement instruments were picked-up in this review. Work stress and interpersonal stress seem more prevalent in RA patients compared to healthy controls. Stress at disease onset was more prevalent in RA compared to osteoarthritis. Psychological stress was higher in patients with chronic pain compared to RA. Role stress, social stress and work stress were induced by RA. More disability, more pain, less social support, lower income, younger age and personality factors like excessive worrying, pessimism, and sensitivity to anxiety, seem to increase the risk for increased stress levels.

CONCLUSION: This scoping review is to our knowledge the first to address the heterogeneity of measurement tools and definitions of stress in RA research. It provides the basis for further research, which is needed to predict different stress trajectories and respond to these with patient-centered interventions.

Disclosure of Interests: None declared

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