

understand the control of pain and healthcare interventions offered to the Portuguese population with OA, this study aims to: 1) analyze the prevalence of IPR among knee or hip OA patients, 2) characterize the population with HKOA according to sociodemographic, clinical and lifestyle variables, and analyze factors associated with IPR; 3) compare HOOS/KOOS, anxiety and depression symptoms and treatment strategies among HKOA patients with IPR and with adequate pain relief (APR).

Methods: We analysed a representative sample of participants with a validated diagnosis of HKOA, from the population-based study EpiReumaPt. Data were collected in a three-stage approach: 1) structured interview, when sociodemographic, lifestyle and health-related data were collected; 2) clinical appointment with a rheumatologist; 3) diagnosis validation by a team of rheumatologists. Inadequate pain relief defined as mean pain intensity in the last week of ≥ 5 points in the numerical pain rating scale, collected in clinical appointments stage. Healthcare interventions were defined as medical appointments, physiotherapy, intake of regular medication for pain relief, joint injection and surgery in the last 12 months. The potential associated factors with IPR were defined as the sociodemographic, anthropometric, lifestyle and health-related variables, as the presence of multimorbidity (≥ 2 chronic non-communicable diseases). To analyse the association of IPR with other clinical outcomes we considered anxiety and depression symptoms, measured with the Hospital Anxiety and Depression Scale; impact of OA in quality of life (QoL) and activities of daily living (ADL), measured with the Knee Injury and Osteoarthritis Outcome Scale (KOOS) and with the Hip Disability and Osteoarthritis Outcome Scale (HOOS) subscales. The factors associated with IPR were analyzed with logistic regression ($p < 0.05$, 95%CI). To assess the association of IPR with HOOS/KOOS activities of daily living and quality of life subscales and in the presence of anxiety and depression symptoms, linear and logistic regression were used. The analysis was performed with SPSS 26.0 complex samples. All analysis were weighted, except for absolute frequencies, that are presented as unweighted counts.

Results: Among the 1035 HKOA subjects evaluated in EpiReumaPt, 765 reported IPR. The weighted prevalence of people with OA with IPR in Portugal is 68.8% (95%CI 63.9, 73.2) with a mean age of 65.32 ± 12.04 years old. In the subgroup with IPR, there were a higher proportion of female ($n=571$, 75.9%, $p < 0.001$), people with low educational level (< 4 years of completed schooling: $n=249$, 79.6% with IPR, $p=0.024$) and multimorbidity ($n=608$; 79.4%, $p < 0.001$), when compared with the APR subgroup. The factors associated with IPR were female sex (OR=2.36, 95% CI: 1.53; 3.65, $p < 0.01$), obesity (OR=2.05, 95%CI: 1.14; 3.71, $p=0.017$) and multimorbidity (OR=2.08, 95%CI: 1.32; 3.29, $p=0.002$), in the final multivariate logistic model. When adjusted for sex, body mass index, and multimorbidity, there was a significant negative effect of IPR in the HOOS/KOOS score of activities of daily living and quality of life with a decrease of over 21 points relative to people with APR ($\beta_{adj} = -21.07$, $p < 0.001$ and $\beta_{adj} = -21.13$, $p < 0.001$, respectively). No differences were found among people with IPR and APR regarding anxiety and depression symptoms. Regarding healthcare interventions used by people with HKOA, people with IPR, when compared with people with APR, consume more NSAIDs ($n=194$, 22.0%, $p=0.003$), simple opioids ($n=45$, 4.8%, $p=0.008$), overall analgesics ($n=63$, 7.3%, $p=0.013$) and paracetamol ($n=90.4$, 2.7%, $p=0.033$); and a higher proportion of people with IPR underwent physiotherapy ($n=121$, 17.5%, $p=0.002$).

Conclusions: Approximately two thirds of the population with HKOA in Portugal have a poor control of pain intensity, despite the utilization of medication and physiotherapy. Obesity and multimorbidity are modifiable risk factors associated to IPR. People with IPR were associated with a lower performance of daily living activities and lower quality of life. When compared to people with APR, a higher proportion of people with IPR are under pharmacological and non-pharmacological treatment plans. These results reveal that there are unmet needs in the population with HKOA regarding symptom control, highlighting the necessity of research on effective interventions for pain relief and of the implementation of strategies at a national level to optimize the outcomes of current care.

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BABS ON A MISSION: AN EXPERIMENTAL STUDY ON THE EFFECTS OF MESSAGE FRAMING AND EXEMPLIFICATION ON TREATMENT INTENTIONS OF OSTEOARTHRITIS PATIENTS

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Purpose: Successful treatment of osteoarthritis (OA), the most prevalent cause of disability of posture and movement in older adults worldwide, is strongly dependent on timely usage of conservative care involving health behaviors such as physical activity and pain management. However, recent findings show intentions to adhere to these conservative treatments are negatively influenced by false beliefs, and rely strongly on testimonies of other patients. In order to achieve behavioral change, it is important that patients receive appropriate and reliable information about effective treatment options in a format that not only appeals to them, but also effectively targets false beliefs. In the current experiment, we compared the effectiveness of a variety of persuasive communication techniques on increasing intentions to adhere to OA health behaviors by changing these beliefs for the better.

Methods: The experiment consisted of a 2 (exemplar vs informative message) x 2 (gain-frame vs loss-frame) between subject factorial design. Members of a research panel ($n=639$) with a self-reported diagnosis of knee osteoarthritis were recruited between February and April 2021 via email. Participants were stratified by gender and randomized into one of four conditions with a video messages applying framing and exemplification (the use of an exemplary figure) as techniques of persuasive communication. The messages ($M=1073$ words, $SD=129$) were audiotaped by the same female speaker (maximum duration of 10 minutes), subtitled, and complemented with images in a slideshow format. After this video, participants filled out a questionnaire on socio-demographic and disease characteristics, beliefs about and intentions to adhere to physical activity and pain medication as OA health behaviors (7-point Likert-scales based on the 'Theory of Planned Behaviour' and the 'Treatment beliefs in hip and knee Osteoarthritis' questionnaires), and several items to check whether the manipulation was perceived as intended. At the end of the questionnaire, participants were thanked for their time and debriefed.

Results: A total of 154 respondents had completed the questionnaire. Sociodemographic and disease related characteristics corresponded well to the general population of Dutch primary care, and were distributed evenly across conditions. Main results show loss framing combined with an exemplar could lead to more positive beliefs than gain framing in either the exemplar or informational condition. These beliefs seem to be moderated by certain sociodemographic and disease characteristics, and in turn, several of these characteristics moderated the mediation of beliefs on intentions to adhere to OA health behaviors.

Conclusions: Results show that a message of under 10 minutes, when stated in a certain manner, could already make a significant difference in a patients' intentions to adhere to OA health behaviors. While the use of an exemplar alone had little effect, framing a message when informing the patient may be a useful tool to promote conservative treatment. Our results suggest, however, that framed communication should be used with care as the effect direction seems to depend on symptom severity. Messages should thus preferably be targeted to specific sub-groups, as opposed to the OA population as a whole.

Female, n (%)	110 (71)
Age (in years), mean (SD)	62.3 (7.9)
BMI, mean [kg/m ²], (SD)	27.3 (4.4)
Daily functioning (KOOS ^a : 0-100), mean (SD)	64.5 (18.0)
Pain VAS (0-10), mean (SD)	4.6 (2.2)
Experiencing symptoms for more than five years, n (%)	96 (62.3)
Presence of OA in other joints, n (%)	85 (55.2)
Knee replacement, n (%)	32 (20.8)
Presence of comorbidities, n (%)	111 (72.0)

Table 1

Osteoarthritis and Cartilage

Characteristics of participants (n=154)