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Journal articles marked with an asterisk indicate an IWH scientist or adjunct scientist is included in the list of authors.

**\*Dobson KG, Gignac MA, Mustard CA. The working life expectancy of American adults experiencing depression. *Social Psychiatry and Psychiatric Epidemiology*. 2023; [epub ahead of print].**

<https://doi.org/10.1007/s00127-023-02547-4> [open access]

**Abstract:** Objectives: To estimate the working life expectancies (WLE) of men and women with depression, examining depression by symptom trajectories from the late 20s to early 50s, and to estimate WLE by race/ethnicity and educational attainment. Methods: Data from 9206 participants collected from 1979 to 2018 in the US National Longitudinal Survey of Youth 1979 cohort were used. Depression was measured using the Center for Epidemiologic Studies Depression Scale Short Form at four time points (age 28-35, age 30-37, age 40, and age 50). Labor force status was measured monthly starting at age 30 until age 58-62. Depressive symptom trajectories were estimated using growth mixture modeling and multistate modeling estimated WLE from age 30-60 for each gender and depressive symptom trajectory. Results: Five latent symptom trajectories were established: a persistent low symptom trajectory (n = 6838), an episodic trajectory with high symptoms occurring before age 40 (n = 995), an episodic trajectory with high symptoms occurring around age 40 (n = 526), a trajectory with high symptoms occurring around age 50 (n = 570), and a persistent high symptom trajectory (n = 277). The WLE for men at age 30 was 30.3 years for the persistent low symptom trajectory, 22.8 years for the episodic before 40 trajectory, 19.6 years for the episodic around age 40 trajectory, 18.6 years for the episodic around age 50 trajectory, and 13.2 years for the persistent high symptom trajectory. Results were similar for

women. WLE disparities between depression trajectories grew when stratified by race/ethnicity and education level. Conclusions: Roughly a quarter of individuals experienced episodic depressive symptoms. However, despite periods of low depressive symptoms, individuals were expected to be employed ~5-17 years less at age 30 compared to those with low symptoms. Accessible employment and mental health disability support policies and programs across the working life course may be effective in maintaining work attachment and improving WLE among those who experience depression.

**\*OLA BE, Smith P. What factors explain recent increases in husband-to-wife violence in Nigerian households? A Decomposition analysis of three waves of cross-sectional data from 2008 to 2018. *Journal of Family Violence*. 2023; [epub ahead of print].**

<https://doi.org/10.1007/s10896-023-00607-6>

**Barnes CM, Guarana C, Lee J, and Kaur E. Using wearable technology (closed loop acoustic stimulation) to improve sleep quality and work outcomes. *Journal of Applied Psychology*. 2023; 108(8):1391-1407.**

<https://doi.org/10.1037/apl0001077>

Abstract: Drawing from the neuroscience literature and recent advancements in sleep technology, we examine how closed loop acoustic stimulation can improve employee sleep and subsequent work behaviors. Specifically, we hypothesize that because closed loop acoustic stimulation improves sleep quality, it enhances work engagement, task performance, and organizational citizenship behavior (OCB) and lowers counterproductive workplace behavior. In a 4-week within-subjects field experiment, 81 employees wore headbands during sleep hours in active mode (with closed loop acoustic stimulation) or sham mode with the volume off (control condition). We found that the treatment condition was linked to higher work engagement, task performance, and OCB the next day (but not counterproductive workplace behavior). Additionally, we found that the headbands were more effective for younger employees. This study contributes to the literature on sleep and work by highlighting a cost-efficient intervention for improving sleep and sleep-related outcomes which do not rely on surmounting the difficulties entailed in increasing sleep duration, as well as age as a boundary condition limiting the effects. (PsyInfo Database Record (c) 2023 APA, all rights reserved)

**Chamberlain SA, Fu F, Akinlawon O, Estabrooks CA, and Gruneir A. Characterizing worker compensation claims in long-term care and examining the association between facility characteristics and severe injury: a repeated cross-sectional study from Alberta, Canada. *Human Resources for Health*. 2023; 21(1):63.**

<https://doi.org/10.1186/s12960-023-00850-4> [open access]

Abstract: Background: Despite the physical demands and risks inherent to working in long-term care (LTC), little is known about workplace injuries and worker compensation claims in this setting. The purpose of this study was to characterize workplace injuries in LTC and to

estimate the association between worker and organizational factors on severe injury. Methods: We used a repeated cross-sectional design to examine worker compensation claims between September 1, 2014 and September 30, 2018 from 25 LTC homes. Worker compensation claim data came from The Workers Compensation Board of Alberta. LTC facility data came from the Translating Research in Elder Care program. We used descriptive statistics to characterize the sample and multivariable logistic regression to estimate the association between staff, organizational, and resident characteristics and severe injury, measured as 31+ days of disability. Results: We examined 3337 compensation claims from 25 LTC facilities. Less than 10% of claims (5.1%, n = 170) resulted in severe injury and most claims did not result in any days of disability (70.9%, n = 2367). Most of the sample were women and over 40 years of age. Care aides were the largest occupational group (62.1%, n = 2072). The highest proportion of claims were made from staff working in voluntary not for profit facilities (41.9%, n = 1398) followed by public not for profit (32.9%, n = 1098), and private for profit (n = 25.2%, n = 841). Most claims identified the nature of injury as traumatic injuries to muscles, tendons, ligaments, or joints. In the multivariable logistic regression, higher staff age (50-59, aOR: 2.26, 95% CI 1.06-4.83; 60+, aOR: 2.70, 95% CI 1.20-6.08) was associated with more severe injury, controlling for resident acuity and other organizational staffing factors. Conclusions: Most claims were made by care aides and were due to musculoskeletal injuries. In LTC, few worker compensation claims were due to severe injury. More research is needed to delve into the specific features of the LTC setting that are related to worker injury.

**Ding H and Kuvaas B. Illegitimate tasks: a systematic literature review and agenda for future research. *Work and Stress*. 2023; 37(3):397-420.**

<https://doi.org/10.1080/02678373.2022.2148308> [open access]

Abstract: Although expecting to undertake core tasks affirming their professional identity, employees often have to deal with tasks they perceive as unnecessary or unreasonable. The concept of illegitimate tasks captures this phenomenon and has attracted growing attention since its first appearance. Illegitimate tasks have been found to explain unique variance in well-being and strain. Given a burgeoning body of literature, a systematic narrative review of illegitimate tasks is warranted. This review summarises research regarding illegitimate tasks' antecedents (leadership, workplace characteristics, individual characteristics, and job characteristics) and outcomes (emotions, work attitudes and cognition, work behaviour, health and well-being, and interpersonal relationships). In addition, we review work done to date regarding the moderators and mediators of these relationships. Finally, we offer future directions for research.

**Espin A, Nunez-Cortes R, Irazusta J, Rodriguez-Larrad A, Torres-Unda J, Vinstrup J, et al. Mental health and vitality predict spinal pain in healthcare workers. *Occupational***

**Medicine. 2023; [epub ahead of print].**

<https://doi.org/10.1093/occmed/kqad096>

**Abstract:** Background: Despite extensive investigation of ergonomic risk factors for spinal pain in healthcare workers, limited knowledge of psychological risk factors exists. Aims: To assess the prospective association of mental health and vitality with development of spinal pain in healthcare workers. Methods: A prospective cohort study was carried out involving 1950 healthcare workers from 19 hospitals in Denmark. Assessments were done at baseline and at 1-year follow-up. Mental health and vitality were measured using the Short Form-36 Health Survey, while spinal pain intensity was measured using a 0-10 scale in the low-back, upper-back and neck, respectively. Cumulative logistic regressions adjusted for several confounding factors were applied, reporting risk estimates as odds ratios (ORs) and 95% confidence intervals (CIs). Results: Using good mental health as reference, moderate (but not poor) mental health at baseline was associated with increased pain intensity in the low-back (OR: 1.41 [95% CI: 1.21-1.77]), upper-back (OR: 1.63 [95% CI: 1.31-2.02]) and neck (OR: 1.31 [95% CI: 1.07-1.61]) at 1-year follow-up. Likewise, using high vitality as reference, both moderate and low vitality at baseline were associated with increased pain intensity in the low-back (OR: 1.54 [95% CI: 1.22-1.94] and OR: 2.34 [95% CI: 1.75-3.12], respectively), upper-back (OR: 1.72 [95% CI: 1.34-2.23] and OR: 2.46 [95% CI: 1.86-3.25], respectively) and neck (OR: 1.66 [95% CI: 1.34-2.06] and OR: 2.06 [95% CI: 1.61-2.63], respectively) at 1-year follow-up. Conclusions: Compared to healthcare workers with good mental health and high vitality, those with moderate mental health and low/moderate vitality, respectively, were more likely to increase spinal pain intensity at 1-year follow-up. These components should also be considered in the prevention of spinal pain in healthcare workers.

**Hasenoehrl T, Palma S, Huber DF, Kastl S, Steiner M, Jordakieva G, et al. Post-COVID: effects of physical exercise on functional status and work ability in health care personnel.**

**Disability and Rehabilitation. 2023; 45(18):2872-2878.**

<https://doi.org/10.1080/09638288.2022.2111467>

**Abstract:** Purpose: Post-COVID fatigue significantly limits recovery and return-to-work in COVID-19 survivors. We aimed to assess the effects of physical exercising on post-COVID-19-symptoms, physical/mental capacities and workability within a workplace-health-promotion project in health-care personnel. Materials and methods: Thirty-two HCWs were enrolled in two groups based on Post-COVID-Functional Scale (PCFS) scores: (1) severe (SSG, n = 11) and (2) mild (MSG, n = 21) symptoms. The participants underwent an eight week exercise intervention program consisting of two supervised resistance exercise sessions per week plus individual aerobic exercise recommendations. Primary outcome-parameter for physical fitness was VO<sub>2</sub>peak. Further, physical function (6MWT, 30 s sit-to-stand test (30secSTS)), mental health (anxiety (GAD-7), depression (PHQ-9), stress (PSS-10), fatigue (BFI), resilience (BRS)), cognitive capacity (MoCA) and workability (WAI) were assessed at baseline, after 4 weeks and after completion of exercise intervention. Results: VO<sub>2</sub>peak improved significantly in the SSG by 2.4 ml/kg/min (95% CI [1.48; 3.01], adj.p < 0.001) and non-significantly in the

MSG by 1.27 ml/kg/min (adj.p = 0.096). Both groups significantly improved their 30secSTS (p = 0.0236) and 6MWT (p = 0.0252) outcomes in both follow-ups (4 weeks and 8 weeks after inclusion). The SSG improved more than the MSG in VO<sub>2</sub>peak and 6MWT both after 4 and 8 weeks, respectively, although not statistically significant; findings were vice versa for the 30secSTS. 30secSTS outcomes correlated significantly with mental health outcomes and workability. Conclusions: Post-COVID exercise intervention improved physical fitness, psychological outcomes and workability in HCWs. Cases with severe fatigue showed higher benefit levels compared to those with mild symptoms. The safe and highly feasible 30secSTS correlated well with physical and mental outcomes and better workability in COVID-19 survivors. Implications for rehabilitation Physical exercising showed to be an effective intervention method in the rehabilitation of COVID-19 survivors suffering from post-COVID syndrome by positively affecting both physical and mental health. In health care workers suffering from post-COVID syndrome, increases in physical performance are directly related to improvements in work ability. The 30 s sit-to-stand test (30secSTS) showed promising results as clinical assessment tool. The results of this study indicate that physical exercising will need to play a large and substantial role over the next years in the rehabilitation of COVID-19 survivors suffering from post-COVID-19-syndrome as it positively affects both physical and mental dimensions of the post-COVID-19-syndrome as well as work ability. Trial registration: ClinicalTrials.gov NCT04841759.

**Jiang SH, Nico E, Bhaskara M, Patil S, Edgar MC, Sadeh M, et al. Characteristics of work-related spine injury in the USA: a National Trauma Data Bank analysis. *Acta Neurochirurgica*. 2023; [epub ahead of print].**

<https://doi.org/10.1007/s00701-023-05731-2>

Abstract: PURPOSE: Workplace injury is a commonplace occurrence in the USA. Spine injuries are especially devastating as they can cause chronic pain and limit mobility which prevents patients from returning to work. Gaining a better understanding of the patients, mechanisms, and treatments associated with these injuries can aid in improving outcomes. The purpose of this study is to characterize the nature of work-related spine injuries. METHODS: The National Trauma Data Bank was queried from 2017 to 2019 for all diagnoses involving the cervical, thoracic, lumbar, and sacral spine. Patient demographics, comorbidities, injury characteristics, spinal diagnoses, and procedures were identified for each occupation. Occupational industries, patient demographics, mechanisms of injury, diagnoses, and spinal procedures were characterized. RESULTS: A total of 100,842 work-related injuries were identified between 2017 and 2019. Of those, 19,002 (19%) were spine injuries, and subsequently, 3963 (21%) required spinal surgery. Eight thousand twenty-nine (42%) cases were seen among construction workers, which had the highest proportion of Hispanic patients (36%). Smoking was prevalent in labor-intensive occupations with high rates of spine injury such as building and grounds maintenance. The most common mechanism of injury was a fall from a roof. The most common injury diagnoses were L1, L2, and L3 fractures, and the most common procedures were T12-L1 fusion, multilevel thoracic fusion, and multilevel

lumbar fusion. **CONCLUSION:** Spine injuries represent a significant portion of work-related injuries in the USA and a considerable portion require neurosurgical intervention. Initial efforts should focus on the prevention and management of lumbar spine injuries in the construction industry

**Lambrechts C, Vandebroeck S, Goorts K, and Godderis L. Return-to-work interventions for sick-listed employees with burnout: a systematic review. Occupational and Environmental Medicine. 2023; 80(9):538-544.**

<https://doi.org/10.1136/oemed-2023-108867> [open access]

**Abstract:** Burnout is a work-related mental health problem that often causes long-term sickness absence. Return-to-work (RTW) interventions for burned-out sick-listed employees aim to prevent long-term work disability. This systematic review addresses two questions: (1) Which interventions for burned-out sick-listed employees have been studied?; (2) What is the effect of these interventions on RTW? We performed a systematic literature review and searched PubMed, Cochrane Central Register of Controlled Trials, Embase, CINAHL and Web of Science from 1 January 2000 to 31 December 2022. We searched for articles of interventions for burned-out sick-listed employees. We conducted the review in line with the Preferred Reporting Items for Systematic Reviews and Meta-Analysis guidelines. Outcome was RTW. We identified 2160 articles after removal of all duplicates. Eight studies met inclusion criteria. RTW outcomes were number of sick-leave days, sick-leave rates, median period of RTW and worked hours per week. Five studies described person-directed interventions, one described a workplace-directed intervention, one described a combination of both intervention types and one study described all three types of intervention. Only the workplace-directed intervention showed a significant improvement in RTW compared with the comparator group: at 18-month follow-up, 89% of the intervention group had returned to work compared with 73% of the comparator group. Only a limited number of studies have explored interventions specifically focused on burned-out sick-listed employees and the effect on RTW. Due to heterogeneity and moderate to high risk of bias of these studies, no firm conclusions can be drawn on the described interventions and their effect on RTW. The study was registered with the International prospective register of systematic reviews (PROSPERO, registration number: CRD42018089155).

**Luo Z, Wang J, Zhou Y, Mao Q, Lang B, and Xu S. Workplace bullying and suicidal ideation and behaviour: a systematic review and meta-analysis. Public Health. 2023; 222:166-174.**

<https://doi.org/10.1016/j.puhe.2023.07.007>

**Abstract:** **OBJECTIVES:** Suicidal ideation and behaviour are potential outcomes of workplace bullying. This review aimed to determine the extent of the association between workplace bullying and suicidal ideation and behaviour. **STUDY DESIGN:** The study incorporated a systematic review and meta-analysis. **METHODS:** The Preferred Reporting Items for Systematic Reviews and Meta-Analyses statement was followed to conduct a comprehensive systematic review and meta-analysis. A combination of subject terms and free words was

used to search nine electronic databases. Two reviewers independently screened articles and extracted information according to the inclusion criteria. A meta-analysis was performed with averaged weighted correlations across samples using the STATA software (version 16.0) from pooled estimates of the main results from all studies. RESULTS: In total, 25 articles of high or medium quality were included in the systematic review; 15 of these were included in the meta-analysis. The prevalence of suicidal ideation and behaviour was 18% and 4%, respectively. Individuals who experienced workplace bullying had 2.03-times and 2.67-times higher odds of reporting suicidal ideation and behaviour, respectively, after adjustment for confounding factors. Moderating and mediating factors may help reduce the risk of suicidal ideation and behaviour for individuals experiencing workplace bullying. CONCLUSION: This study indicated that exposure to workplace bullying significantly increased the risk of suicidal ideation and behaviour

**Melnyk BM, Hsieh AP, Tan A, McAuley JW, Matheus M, Larson B, et al. The state of health, burnout, healthy behaviors, workplace wellness support, and concerns of medication errors in pharmacists during the COVID-19 pandemic. *Journal of Occupational & Environmental Medicine*. 2023; 65(8):699-705.**

<https://doi.org/10.1097/JOM.0000000000002889> [open access]

Abstract: Objectives: The aims of the study were to describe the well-being and lifestyle behaviors of health-system pharmacists during the COVID-19 pandemic and to determine the relationships among well-being, perceptions of workplace wellness support, and self-reported concern of having made a medication error. Methods: Pharmacist ( N = 10,445) were randomly sampled for a health and well-being survey. Multiple logistic regression assessed associations with wellness support and concerns of medication error. Results: The response rate was 6.4% ( N = 665). Pharmacists whose workplaces very much supported wellness were 3× more likely to have no depression, anxiety, and stress; 10× more likely to have no burnout; and 15× more likely to have a higher professional quality of life. Those with burnout had double the concern of having made a medication error in the last 3 months. Conclusions: Healthcare leadership must fix system issues that cause burnout and actualize wellness cultures to improve pharmacist well-being. Copyright © 2023 American College of Occupational and Environmental Medicine.

**Pichene-Houard A, Sirveaux F, Clerc-Urmes I, Paris N, Michel B, Jacquot A, et al. Predictive factors of return-to-work trajectory after work-related rotator cuff syndrome: a prospective study of 96 workers. *American Journal of Industrial Medicine*. 2023; 66(9):759-774.**

<https://doi.org/10.1002/ajim.23511>

Abstract: Objective: Sustained return to work after surgery for work-related rotator cuff syndrome (WRRCS) remains quite difficult. The main purpose of the present study was to identify predictive factors of a return-to-work (RTW) trajectory. Methods: A total of 96 workers with WRRCS were identified by 4 surgeons. They were followed prospectively before and after the surgery, until 1 year after RTW, or for 20 months after surgery when they did

not. Participants completed a series of standardized questionnaires related to working conditions, health, and beliefs, and performed functional tests at the inclusion time. During the follow-up period, they were regularly asked about their working conditions (present or not at work), activity (normal or lightened physical duties) and schedules (full- or part-time job). Statistical analysis was based on single- and multiple-factor models of prediction of the workers' trajectory. Results: Three trajectories of RTW were distinguished, considering RTW and absenteeism that occurred during the follow-up: stable, unstable, and non-RTW. The median age of the sample was 49.5 [45.0-54.0], with 67.7% of workers employed in highly physically demanding jobs. In the multiple factor model, three factors were highly predictive of the trajectory: perceived health before surgery, having had a repaired ruptured-rotator-cuff tendinopathy, and the level of physical demand of the job. Conclusion: Three easy-to-collect predictive factors of RTW trajectory have been identified. They may be useful for healthcare professionals and care givers to identify vulnerable workers' risk of occupational dropout after arthroscopic surgery for rotator cuff tendinopathy.

**Rottman C, Gardner C, Liff J, Mondragon N, and Zuloaga L. New strategies for addressing the diversity-validity dilemma with big data. *Journal of Applied Psychology*. 2023; 108(9):1425-1444.**

<https://doi.org/10.1037/apl0001084>

Abstract: The diversity-validity dilemma is one of the enduring challenges in personnel selection. Technological advances and new techniques for analyzing data within the fields of machine learning and industrial organizational psychology, however, are opening up innovative ways of addressing this dilemma. Given these rapid advances, we first present a framework unifying analytical methods commonly used in these two fields to reduce group differences. We then propose and demonstrate the effectiveness of two approaches for reducing group differences while maintaining validity, which are highly applicable to numerous big data scenarios: iterative predictor removal and multipenalty optimization. Iterative predictor removal is a technique where predictors are removed from the data set if they simultaneously contribute to higher group differences and lower predictive validity. Multipenalty optimization is a new analytical technique that models the diversity-validity trade-off by adding a group difference penalty to the model optimization. Both techniques were tested on a field sample of asynchronous video interviews. Although both techniques effectively decreased group differences while maintaining predictive validity, multipenalty optimization outperformed iterative predictor removal. Strengths and weaknesses of these two analytical techniques are also discussed along with future research directions. (PsycInfo Database Record (c) 2023 APA, all rights reserved)

**Shdaifat EA. Presenteeism and productivity loss among nurses. *International Journal of Occupational Safety & Ergonomics*. 2023; 29(3):1007-1015.**

<https://doi.org/10.1080/10803548.2022.2108660>

Abstract: Objectives. Presenteeism is a significant problem among the working force, and



nurses are not an exception from these phenomena. The purpose of the study was to determine the productivity loss due to presenteeism from three dimensions and to evaluate the associated factors among nurses. **Methods.** A cross-sectional study was conducted among 309 nurses to evaluate presenteeism using the Stanford presenteeism scale (SPS), the health performance questionnaire (HPQ) and the work productivity short inventory (WPSI). **Results.** The study found that nurses had a high level of presenteeism using the SPS ( $21.0 \pm 4.3$ ) and the HPQ ( $80.0 \pm 18.2$ ). On both scales, presenteeism was significantly associated with nurses who were older than 32 years, with experience of more than 10 years, having children and specifically having two children. The results of the WPSI showed that the productivity loss of presenteeism per nurse annually was USD 1959 and for all nurses was USD 605,283. **Conclusion.** Eventually, evaluating the presenteeism level will help policymakers to understand the working conditions and related personal characteristics.

**Singh P, Bhardwaj P, Sharma SK, and Agrawal AK. Association of organisational factors with work-related musculoskeletal disorders and psychological well-being: a job demand control model study. *Theoretical Issues in Ergonomics Science.* 2023; 24(5):593-606.**

<https://doi.org/10.1080/1463922X.2022.2121441>

**Weale V, Lambert KA, Graham M, Stuckey R, and Oakman J. Do work-family conflict or family-work conflict mediate relationships between work-related hazards and stress and pain? *American Journal of Industrial Medicine.* 2023; 66(9):780-793.**

<https://doi.org/10.1002/ajim.23514>

**Abstract:** Introduction: Previous research has identified associations between work-family conflict (WFC) and health outcomes (e.g., musculoskeletal pain). This study investigated whether WFC and family-work conflict explain relationships between exposure to work-related hazards and musculoskeletal pain and stress for workers undertaking some or all of their work at home. Possible differences by home workspace location were also explored. **Methods:** Longitudinal survey data were collected from workers in Australia engaged in work from home for at least two days per week. Data was collected at four timepoints approximately 6 months apart (Baseline [October 2020] n = 897; Wave 1 [May/June 2021] n = 368; Wave 2 [October/November 2021] n = 336; Wave 3 [May 2022] n = 269). Subjective measures of work-related psychosocial hazards, occupational sitting and physical activity, musculoskeletal pain, and stress were collected via an online questionnaire. Mediation analyses were conducted using the R package "mediation." Analyses were also conducted with the data set stratified by home office location, using R version 4.1.3. **Results:** Both WFC and family-work conflict acted as mediators between psychosocial work-related hazards and musculoskeletal pain and stress. WFC mediated more relationships than family-work conflict. Location of home workspace was important, particularly for those working in a space at home where they may be subject to interruptions. **Conclusion:** Addressing WFC is a legitimate means through which musculoskeletal pain and stress can be reduced.

Organizational risk management strategies need to address all work-related risks, including those stemming from work-life interaction.

**Zhou H, Guns R, and Engels TCE. Towards indicating interdisciplinarity: characterizing interdisciplinary knowledge flow. Journal of the Association for Information Science and Technology. 2023; [epub ahead of print].**

<https://doi.org/10.1002/asi.24829> [open access]

Abstract: This study contributes to the recent discussions on indicating interdisciplinarity, that is, going beyond catch-all metrics of interdisciplinarity. We propose a contextual framework to improve the granularity and usability of the existing methodology for interdisciplinary knowledge flow (IKF) in which scientific disciplines import and export knowledge from/to other disciplines. To characterize the knowledge exchange between disciplines, we recognize three aspects of IKF under this framework, namely broadness, intensity, and homogeneity. We show how to utilize them to uncover different forms of interdisciplinarity, especially between disciplines with the largest volume of IKF. We apply this framework in two use cases, one at the level of disciplines and one at the level of journals, to show how it can offer a more holistic and detailed viewpoint on the interdisciplinarity of scientific entities than aggregated and context-unaware indicators. We further compare our proposed framework, an indicating process, with established indicators and discuss how such information tools on interdisciplinarity can assist science policy practices such as performance-based research funding systems and panel-based peer review processes.

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