

DETERMINANTS FOR ADHERENCE TO AN EXERCISE AND EDUCATION PROGRAMME FOR OA: A COMPARISON OF THREE COUNTRIES FROM THE GLA:D INTERNATIONAL NETWORK

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Aim

To investigate the association between individual characteristics and levels of adherence to an exercise and education osteoarthritis management programme (OAMP) (Good Life with osteoArthritis in Denmark (GLA:D)).

Results

A total of 43,912 participants, where 82% had high, 10% medium and 7% low attendance.

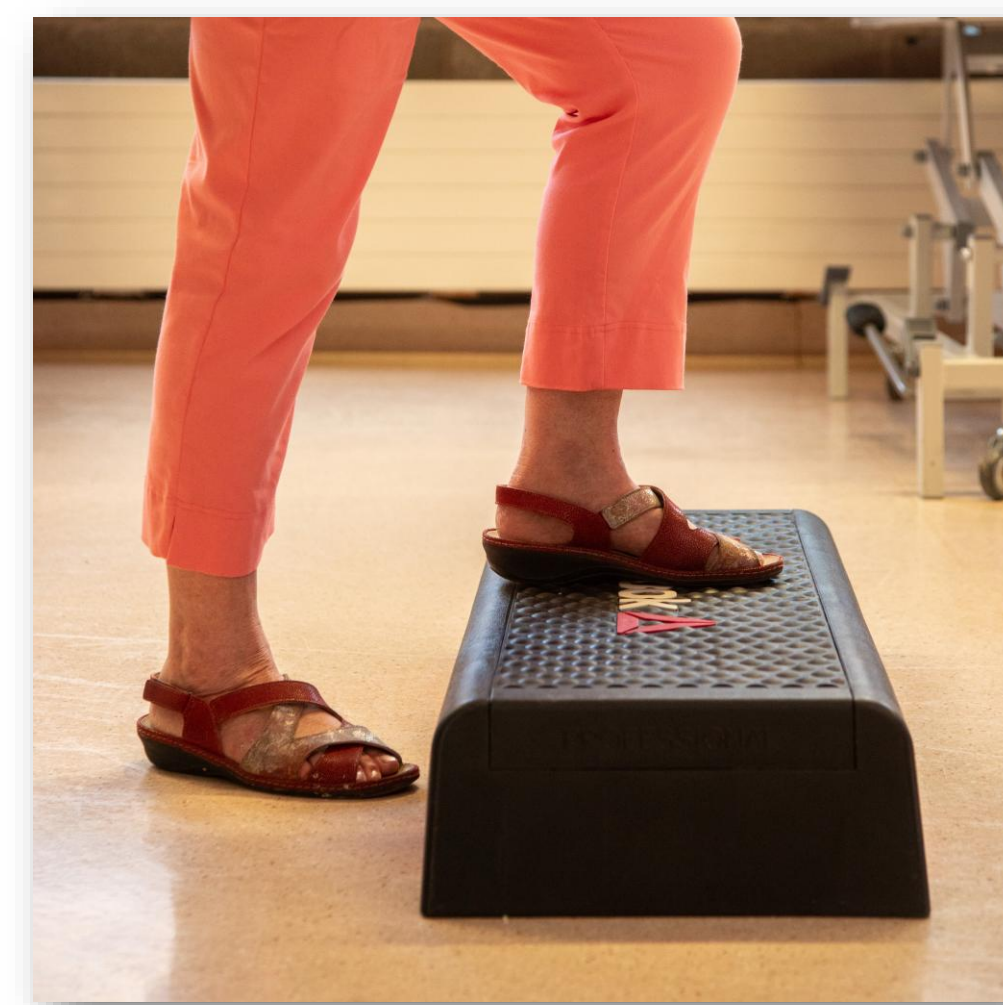
| Variable | OR (95% CI) | *P <0.05 |
|---|------------------|----------|
| Year | | <0.001* |
| 2021-2024 (ref) | - | - |
| 2013-2016 | 1.33 (1.22-1.45) | < 0.001* |
| 2017-2020 | 1.16 (1.07-1.24) | < 0.001* |
| Country | | <0.001* |
| Denmark (ref) | - | - |
| Canada | 6.17 (5.26-7.22) | < 0.001* |
| Ireland | 2.46 (1.52-3.99) | < 0.001* |
| Gender | | |
| Female (ref) | - | - |
| Male | 0.95 (0.89-1.01) | 0.091 |
| Age | 1.02 (1.01-1.02) | < 0.001* |
| Living status | | |
| Living with others (partner, family, friends or others) (ref) | - | - |
| Living alone | 0.86 (0.81-0.92) | < 0.001* |
| Educational level | | <0.001* |
| Completed higher education (ref) | - | - |
| Completed primary school | 1.32 (1.21-1.45) | < 0.001* |
| Completed secondary school | 1.25 (1.13-1.38) | < 0.001* |
| Completed apprenticeship | 1.16 (1.08-1.24) | < 0.001* |
| Employment level | | <0.001* |
| Retired (ref) | - | - |
| Employed | 0.75 (0.61-0.92) | 0.006* |
| Unemployed | 0.66 (0.60-0.72) | < 0.001* |
| Leave of absence | 0.84 (0.72-0.98) | 0.024* |
| Most affected joint | | |
| Knee (ref) | - | - |
| Hip | 0.98 (0.92-1.04) | 0.479 |
| Duration of joint symptoms | | 0.140 |
| Less than 1 year (ref) | - | - |
| 1-5 years | 1.02 (0.95-1.08) | 0.607 |
| More than 5 years | 0.93 (0.86-1.02) | 0.106 |
| Fear of movement | | |
| No (ref) | - | - |
| Yes | 1.13 (1.05-1.21) | 0.001* |
| Pain intensity during the last week ⁺ | 0.99 (0.99-1.00) | 0.375 |
| KOOS/HOOS QOL [#] | 0.99 (0.99-0.99) | 0.007* |
| 40 m fast-paced walking test [^] | 0.99 (0.99-1.00) | 0.048* |
| 30 second sit-stand chair test [‡] | 0.99 (0.98-0.99) | 0.002* |
| Healthcare setting | | |
| Public (ref) | - | - |
| Private | 4.30 (4.03-4.58) | < 0.001* |

⁺ Numeric Rating Scale (NRS): 0 no pain to 100 worst pain imaginable; [#] NRS: 0 worst possible knee/hip symptoms to 100 no knee/hip symptoms; [^] Time in seconds; [‡] Number of rises

Methods

A secondary analysis of data from participants enrolled in the GLA:D Hip and Knee OAMP in Ireland, Denmark and Canada was conducted. Demographic (e.g., age), joint-related (e.g., duration of joint symptoms) and OAMP-related characteristics (e.g., healthcare setting) and health outcomes data (e.g., 30-second sit-stand chair test) were included as independent variables. Descriptive analysis was used to illustrate participant characteristics, and a binary logistic regression was used with high attendance versus low/medium attendance as the dependent variable of adherence.

Categorisation of levels of attendance at GLA:D sessions.



| | 0-4 exercise sessions | 5-8 exercise sessions | 9-12 exercise sessions |
|-------------------------------|-----------------------|-----------------------|------------------------|
| No education session | Low attendance | Medium attendance | Medium attendance |
| One education session | Low attendance | Medium attendance | High attendance |
| Two education sessions | Low attendance | Medium attendance | High attendance |

Conclusion

High adherence was positively associated with older age, higher education levels, retired status, fear of movement, private healthcare settings and in-person treatment methods. Negative associations with high adherence were found for living alone, employment status, better baseline health outcomes and online treatment methods.

Findings from this study on the association between individual characteristics and levels of adherence to an international exercise and education osteoarthritis management programme (OAMP) (GLA:D) suggest:

- Adherence was high (82%) across Ireland, Denmark and Canada.
- There was a complex interplay of individual characteristics influencing adherence to exercise and education OAMPs.
- These findings underscore the need for tailored, individual-centred approaches that consider demographic (**e.g., younger age**), joint-related (**e.g., fear of movement**) and OAMP-related (**e.g., public healthcare setting**) characteristics and health outcomes (**e.g., lower baseline quality of life**) to optimise adherence and implementation of guideline-based management for OA.

What are the implications for research, policy, and practice?

Actively promote the components and benefits of exercise and education osteoarthritis management programmes

Provide targeted education and training across demographic, joint-related, OAMP-related characteristics, health outcomes

Support development of tailored management approaches guided by public and private healthcare settings