

# How is the GLA:D® Programme Implemented in Physiotherapy Practice?: the Development of a Survey

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**Abstract:** “Good Life with Osteoarthritis in Denmark” GLA:D® is an educational and exercise rehabilitation programme, which is proven to be effective in reducing pain and improving mobility in people with knee and/or hip osteoarthritis. Despite the programme's implementation in 11 countries, it is unknown how it is implemented in clinical practice.

A survey was developed using the TiDieR-Rehab checklist. The development included three survey development cycles and a testing phase with four testers.

The developed survey encompassed 62 questions. Feedback addressed content clarity, grammatical precision, and user interface design. Key modifications included clarifying the intentions of question and improving visual elements.

The survey provides an innovative approach in investigating GLA:D® implementation in physiotherapy practices. The development process highlighted the importance of iterative cycles in creating useful and appropriate surveys

**Keywords:** questionnaire, development, implementation, physiotherapy, rehabilitation, Osteoarthritis

# 1. INTRODUCTION

Musculoskeletal conditions like osteoarthritis affect over 1.7 billion people globally. Rehabilitation programmes such as “Good Life with Osteoarthritis in Denmark” (GLA:D®), have proven to reduce pain, improve mobility and increase quality of life through education and specific exercises (Roos et al., 2021). Currently this programme is used in 11 countries around the world (Kjær et al., 2025). In each country physiotherapists are specifically trained to the theoretical and practical aspects of the programme and can only use the status of the GLA:D® physiotherapist after completing the required training. Despite the evidence around the programme, it is currently unclear how the programme is implemented in clinical practice.

In implementation science, several frameworks have been developed to bridge the gap between evidence-based literature and the use of it in clinical practice (Nilsen, 2015). The template for intervention description and replication (TIDieR) checklist (Hoffmann et al., 2014) is one of the only guidelines which provides guidance to the reporting of interventions and has been used in studies worldwide. Specifically for interventions in the area of rehabilitation, the TIDieR-Rehab checklist has been developed (Signal et al., 2024), with additional details on the study population (Who), timing of the intervention (When), the planned intervention dosage (How much, How challenging and Regression/Progression), person-centred care (Personalisation) and negative undesired effects (Harms). The TIDieR-Rehab checklist consists of 15 sections, each covering separate aspects of an intervention in the rehabilitation setting.

As the implementation of the GLA:D® programme in clinical setting has not yet been explored, this project describes the development of a survey which aims to investigate how the GLA:D® programme is implemented in clinical practice. The TIDieR-Rehab checklist (Signal et al., 2024) was used as a framework for the survey.

# 2. METHODS

The aim of this study was the development of a survey which could investigate the implementation of the GLA:D® programme in clinical practice. The survey was developed for two reasons: 1) to provide a general overview of the implementation of the GLA:D® programme across countries, 2) to provide an insight into which exercises would lend itself best for home-based feedback.

## 2.1. Design

The development of the survey was conducted in development cycles and pilot testing. The survey had a cross-sectional design. The Lower Austrian ethics committee confirmed that, due to the study's low risk and the professional physiotherapists involved, no formal ethics application or vote was required (GS3-EK-12\_941-2025).

## 2.2. Framework

The TIDieR-Rehab checklist (Signal et al., 2024) has been used as a framework for the development of the survey. This checklist is specifically designed to improve the reporting of interventions.

## 2.3. Development cycles

The survey was developed in three cycles. In the first cycle two researchers with a background in physiotherapy separately developed questions regarding demographics and the items of the TIDieR-Rehab checklist. In order to provide an insight into which exercises would lend itself best for home-based feedback, an additional item was developed regarding the exercises which are listed in the GLA:D® programme. Then the questions were compared and discussed in order to allow for the different perspectives and interpretations of the items of the checklist. In the second cycle, the answers to the individually developed questions were compared. In the last cycle the complete survey was reviewed by both researchers individually and changes were made. Lastly the paper-based survey was transformed into an online survey with the help of LimeSurvey (Limesurvey GmbH., n.d.).

## 2.4. Pilot Testing

The survey was sent to two physiotherapists and two researchers working in the field of movement science. They were asked to provide feedback on the appropriateness of the content of the questions and answers, grammatical issues and any issues regarding the user interface. Feedback was received and incorporated in the online survey. In the final test of usability, the survey was tested on an Android laptop, a Macintosh laptop, and two different smartphones.

# 3. RESULTS

The survey was developed in October 2025 and tested in November 2025. In total 62 questions were included in the survey. No changes were required in the demographic section. Feedback from the testers included predominantly feedback on content and the user interface.

In the content related feedback, the exercise section, where only the exercises of the start and the end of the GLA:D® programme were asked, was challenged. In addition, in the question as to ‘why’ physiotherapists used the GLA:D® programme, it was not clear if this question was related to the patient’s or the physiotherapist’s aims. Lastly one tester remarked that the sequence of the questions asked was not always logical.

The grammatical feedback addressed some spelling mistakes and one question needed to be rephrased as it was too complex. The names of the products or items used during the programme were also changed, so that no names of brands were used.

Regarding the user interface, the testers were concerned about the colours used in some questions as they made it difficult to distinguish between selected and not selected, the appearance of comment boxes and pictures which were not properly displayed.

## 4. DISCUSSION

This study described the development of a survey to investigate how the GLA:D® programme is implemented in clinical practice. Understanding how the programme is applied in physiotherapy settings is important to bridge the gap between evidence-based literature and evidence-based practice. This study resulted in the successful creation of the survey.

To our knowledge, the TIDieR-Rehab checklist (Signal et al., 2024) has not yet been used to develop surveys in the area of musculoskeletal rehabilitation. This could be due to the recent nature of the publication of the TIDieR-Rehab in 2024. Randell et al. (2018) have used the TIDieR checklist as a framework to develop a survey about the current practice of neurofeedback using fMRI and, similar to our approach, have interpreted the items of the TIDieR checklist to their topic.

The use of the TIDieR-Rehab checklist (Signal et al., 2024) has proven to be very beneficial in building a structure for the questionnaire. The additional aspects to the original TIDieR checklist, in particular the details on the intervention dosage (How much, How challenging and Regression/Progression) and the person-centred care (Personalisation), were instrumental for a detailed description in the survey.

Developing a survey requires detailed planning (Boynton & Greenhalgh, 2004). The use of the development cycles improved the quality of the survey, however it must be noted that the survey was not validated. Boynton and Greenhalgh (2004) have also highlighted that questions must be appropriate for the targeted population. In this study, two physiotherapists were included during the testing phase, however the number of physiotherapists could be expanded for a next study to further ensure the appropriateness of the questions and answers.

## 5. CONCLUSION

This study describes the development of a survey which aims to investigate how the GLA:D® programme is implemented in clinical practice. The survey has the potential to compare the implementation between different settings and nations, ensuring that the GLA:D® programme is implemented in an evidence-based way. It also shows that the TIDieR-Rehab checklist (Signal et al., 2024) can be used as a framework for the development of a survey related to the implementation of the GLA:D® programme. Future development studies could include more testers and a validation stage.

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