



PATIENT QUESTIONNAIRE

Dear Sir or Madam,

We are asking you to participate in a study on the introduction of a mobile-based physiotherapy exercise app for patients with knee osteoarthritis, because only you can help us to determine users' expectations of a mobile -based app with exercises to improve knee joint mobility and strengthen muscles.

The survey is being conducted as part of the ARIS-funded project Impact of Integrated Clinical Pathways on Patient Outcomes, Communication and Cost-effectiveness Usability, Effectiveness and Satisfaction with an Online Integrated Clinical Pathway for Patients with Cartilage Impairments of the Knee Joint, with a Focus on an Online Exercise Program (research code: L7-50184).

Participation in the survey is voluntary and anonymous. The survey will take approximately 10 minutes to complete. The raw data may be published in public sources in accordance with the principles and guidelines of open science. However, the data will be anonymized and cannot be linked to individuals. The results of the survey will be published on the project website: https://fzv.uni-nm.si/raziskovanje/programi_in_projekti/aris_aplikativni_projekt_2023_2026/ as soon as the analysis is completed. If you have any questions or concerns about your participation in the survey, you can contact us at any time at sabina.krsnik@uni-nm.si or 07-393-00-21. By completing the questionnaire, you agree to the above terms and confirm that you have been adequately informed about your participation.

Thank you in advance for your cooperation, members of the project team



Javna agencija za znanstvenoraziskovalno
in inovacijsko dejavnost Republike Slovenije



Demographic data

1. Spol:

- a) male
- b) female
- c) I do not wish to answer

2. Completed age:

- (a) up to 40 years
- b) 41-50 years
- c) 51-60 years
- d) 61-70 years
- e) 71-80
- (f) more than 80 years

3. Completed education:

- a) Completed education:
- b) Elementary school
- c) Secondary education
- d) Higher education
- e) Higher education
- f) Specialization or master's degree
- g) Doctorate in science

4. How much time a day do you usually spend sitting?

- a) I sit very little (up to 2 hours)
- b) I sit a little (2 to 3 hours)
- c) I sit half the day
- d) I sit most of the day
- e) I sit most of the day

5. In which area do you work or did you work when you retired?

- | | |
|--|---|
| a) Administration | o) Law and economics |
| b) Banking, finance and insurance | p) Wood processing, paper production, printing |
| c) Biology, chemistry, food technology, pharmacy and environmental science | q) Food industry, food science, veterinary medicine |
| d) Cleaning and maintenance | r) Manufacturing and technical services |
| e) Electrical engineering, electronics, telecommunications | s) Computing, programming, IT |
| f) Hospitality and tourism | t) Accounting and audit |
| g) Civil engineering, architecture, geodesy, spatial planning | u) Mining, geology, metallurgy, oil and gas |
| h) Education and sport | v) Mechanical engineering, metalworking, vehicle repair |
| i) Agriculture, horticulture, fisheries, forestry | w) Textiles, leather |
| j) Commercial and marketing | x) Transport, logistics and warehousing |
| k) Creativity, design | y) Shop |
| l) Mathematics, physics and meteorology | z) Art and culture |
| m) Media and public relations | aa) Management, consulting, leadership, HR |
| n) Personal services and security | bb) Legislators and civil servants |
| | cc) Health, care, social services |
| | dd) I am not (was) employed |

6. Please indicate the HIGHEST level of physical activity you are currently able to participate in (Mark with an X).

Choices	Level	Description
	level 0	Sickness absence, retirement or immobility due to knee problems
	Level 1	Work - sitting (office work, etc.) Walking on flat terrain
	Level 2	Work - light manual work (e.g. in a restaurant or shop) Walking on uneven ground, but not hiking and without a backpack (walking in the forest is no longer possible)
	Level 3	Work - less physically demanding work (e.g. caring for the sick, gardening) Competitive and recreational sports - swimming Walking in the woods
	Level 4	Work - medium work (e.g. car transport, farm work) Recreational sport - cycling, cross-country skiing, jogging on flat terrain at least twice a week
	Level 5	Work - very heavy work (e.g. construction, tree felling) Competitive sport - cycling, cross-country skiing Recreational sport - running on uneven ground at least 2 times a week
	Level 6	Recreational sports - tennis and badminton, handball, skiing, running on uneven ground at least 5 times a week
	Level 7	Competitive sports - tennis, running, motocross, speedway, handball, basketball Recreational sports - football, hockey, rugby, athletics - ski jumping
	Level 8	Competitive sports - badminton or squash, athletics - ski jumping, skiing
	Level 9	Competitive sports - football (lower leagues), hockey, martial arts, gymnastics, basketball
	Level 10	Competitive sports - football - international or national league

Motivation

7. On a scale of 1 to 10, how would you rate your current motivation to do regular exercises to improve knee mobility and strengthen your muscles? (Circle the number that best applies to you)

I am not motivated at all

I am very motivated

1 2 3 4 5 6 7 8 9 10

8. Please use the following to rate how often you currently exercise compared to how often you would like to exercise (Circle the letter):

- a) I hardly exercise now, although I would like to exercise much more often.
- b) I do exercise, but less often than I would like.
- c) My current exercise plan largely corresponds my preferences.
- d) I may exercise a little more than I would like to, but that's still acceptable.
- e) At the moment, I am doing a lot more sport than I'd actually like to, and I think that's too much.

Health literacy

9. How often do you use the apps to find information about health and well-being? (Circle the number that applies most to you)

Never

Rarely

Sometimes

Often

Very often

1 2 3 4 5

10. Assess your ability to comprehend health information obtained on the Internet.

- a) Very bad: I find it *difficult to understand, if not impossible to understand, the health information I find on the internet.*
- b) Con: I mostly have problems understanding health information on the internet.
- c) Average: I understand some health information on the internet, but not others.
- d) The good: I mostly have a good understanding of the health information I find on the internet.
- e) Very good: I can easily understand almost all health information I find on the internet.

11. How confident are you in assessing the reliability of health information you find online?

- a) I'm not sure at all:
I lack confidence in my ability to assess the reliability of health information online and feel lost in distinguishing between reliable and unreliable sources.
- b) A little unsure:
I have some difficulty assessing the reliability of health information online and often feel unsure/uncertain when deciding which information to trust.
- c) Partly sure:
Sometimes I am confident in my ability to assess the reliability of health information on the web, but there are still times when I find myself in doubt or uncertainty.
- d) Pretty sure:
I am mostly confident in my ability to assess the reliability of health information on the web and feel comfortable distinguishing reliable from unreliable sources.
- e) Absolutely sure:
I have full confidence in my ability to assess the reliability of health information on the web and rarely doubt my assessments of the reliability of information.

Process and quality of treatment

12. Please indicate in order which healthcare professionals you visited during your knee osteoarthritis treatment (1 - first visit) and rate how satisfied you were with their overall treatment (insert X). If you did not visit a particular healthcare professional, leave the box blank.

Health worker	Order of precedence	Satisfaction with treatment				
		Very dissatisfied	Dissatisfied	Neither/ I don't know	Satisfied	Very satisfied
General practitioner						
Physiotherapist						
Orthopaedic surgeon						
Physiotherapist						
Rheumatologist						
Occupational therapist						
Nutritionist						
Other:						

Involvement in the management of knee arthritis

13. Please indicate which health professionals should be involved in the management of knee osteoarthritis and how (insert X).

Health worker	Get involved		
	No need for inclusion	Optionally to include	Mandatory to include
General practitioner			
Physiotherapist			
Orthopaedic surgeon			
Radiologist			
Physiotherapist			
Rheumatologist			
Psychologist			
Occupational therapist			
Nutritionist			
Other:			

Expectations of an app to improve knee mobility and strengthen muscles

14. Please indicate which device you would prefer to exercise at home to increase knee mobility and strengthen muscles? (Circle one letter before your answer.)

Via

- a) Phone
- b) Personal computer
- c) Smartwatches
- d) Others: _____

15. The following questions are about what is important for you to create in an app to improve knee joint mobility and muscle strengthening.

(Circle the number that is most important to you: 1-not at all important, 10-extremely important)

How important is to you:

a) that the app contains important information about knee osteoarthritis, treatment strategies and recommended lifestyle?	1	2	3	4	5	6	7	8	9	10
b) does the app help you to set goals to improve knee mobility and muscle strengthening, achieve them and measure progress?	1	2	3	4	5	6	7	8	9	10
c) does the app contain videos with different exercises to improve knee mobility and strengthen muscles that you can do regularly?	1	2	3	4	5	6	7	8	9	10
d) does the app motivate the patient (e.g. email reminder) to perform the exercises every week?	1	2	3	4	5	6	7	8	9	10
e) does the app remind the patient (email reminder) if they have not logged into the app to do the exercises for three days?	1	2	3	4	5	6	7	8	9	10
f) the app allows the patient to communicate with the physiotherapist by allowing the patient to ask questions?	1	2	3	4	5	6	7	8	9	10
g) does the patient using the app have the possibility to talk to the physiotherapist once a week via phone?	1	2	3	4	5	6	7	8	9	10
h) can the patient use the app to communicate with the physiotherapist once a week via video call?	1	2	3	4	5	6	7	8	9	10
i) does the app allow patients to communicate with each other?	1	2	3	4	5	6	7	8	9	10

16. A reasonable amount of time to spend on the app exercises is:

- a) up to 15 minutes
- b) 16 min-30 min
- c) 31 min-45 min

17. Please indicate how much you agree with the statements regarding the usefulness of the app for improving knee joint flexibility and strengthening muscles? (Mark with an X).

a) Ease of use of the app

Claims	I strongly disagree	I disagree	I neither agree nor disagree	I agree	I fully agree
The app must be easy to use.					
The information in the app must be well organised so that I can easily find the information I need.					

b) Organisation of system information

Claims	I strongly disagree	I disagree	I neither agree nor disagree	I agree	I fully agree
The app must allow me to easily and quickly correct any mistakes I make when using the app.					
The app must provide a suitable way to receive instructions on how to perform the exercise safely.					
The app should clearly show how to perform the exercise.					
Navigation between the tabs should be easy.					

c) Usability

Claims	I strongly disagree	I disagree	I neither agree nor disagree	I agree	I fully agree
The app must include instructions on how to perform the tested exercises to increase mobility of the knee joints and strengthen the muscles.					
The app should help you to perform the exercises correctly.					
The app should facilitate communication with the physiotherapist.					
Using the app, I need to have several different options to interact with the physiotherapist.					
I need to make sure that all information I send to the physiotherapist via the app is actually received.					

18. What would be an obstacle for you to use an app for knee joint mobility and muscle strengthening exercises (insert X)?

Barriers	Possible barriers to using the app				
	I strongly disagree	I disagree	I neither agree nor disagree	I agree	I fully agree
A lack of technical knowledge would be a barrier for me to use an exercise app.					
Poor internet access would be a barrier to using an exercise app.					
Inaccurate information about my illness would be a barrier to using an exercise app.					
Not understanding the information would be a barrier to using the exercise app.					
Lack of time would be a barrier to using an exercise app.					
Lack of self-motivation would be a barrier for me to use an exercise app.					
I would find it difficult to reach a physiotherapist via an app.					
I would find it difficult to communicate with a physiotherapist via an app.					
I would find the unclear presentation of the exercises via the app to be a barrier.					
Insufficient space for the exercise would be a barrier to using an exercise app.					

19. What would be your advantage in using an app to exercise to increase knee mobility and strengthen the muscles of (insert X)?

Advantages	Advantages of using the app				
	I strongly disagree	I disagree	I neither agree nor disagree	I agree	I fully agree
Saving time would be an advantage for me when using a app for exercise.					
Saving money would be an advantage for me if I used the app.					
More autonomy would be an advantage for me if I used the app.					
I would consider it an advantage to be more motivated if I used the app.					
I would find more convenience an advantage when using the app.					
I would benefit from easier access to a physiotherapist.					
Easier communication with the physiotherapist would be an advantage for me when using the app.					
I would consider the accuracy/truthfulness of the information an advantage.					
I would consider it an advantage to use the app more efficiently.					
I would consider the ability to view the exercises multiple times an advantage of using app.					

Thank you for your participation!