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Research article

Putting psychology into telerehabilitation: Coping planning as an example for how to integrate behavior change techniques into clinical practice

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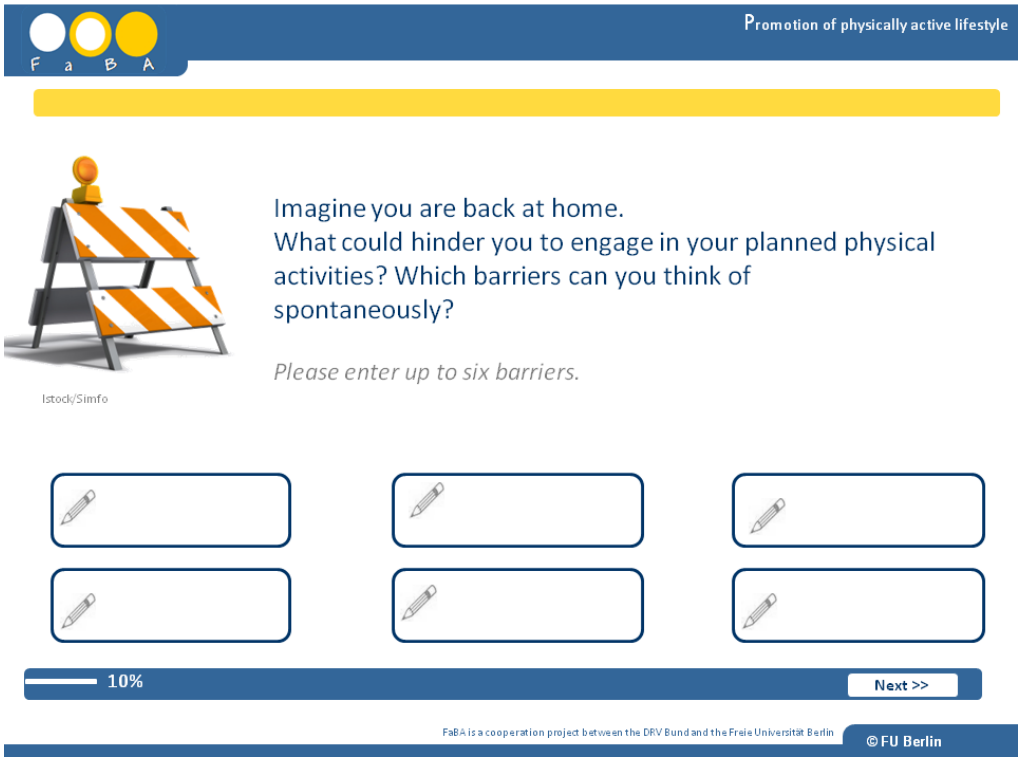
Appendix

Appendix A


Promotion of physically active lifestyle
Imagine you are back at home.
What could hinder you to engage in your planned physical activities? Which barriers can you think of spontaneously?
Please enter up to six barriers.
Istock/Simfo
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Next >>
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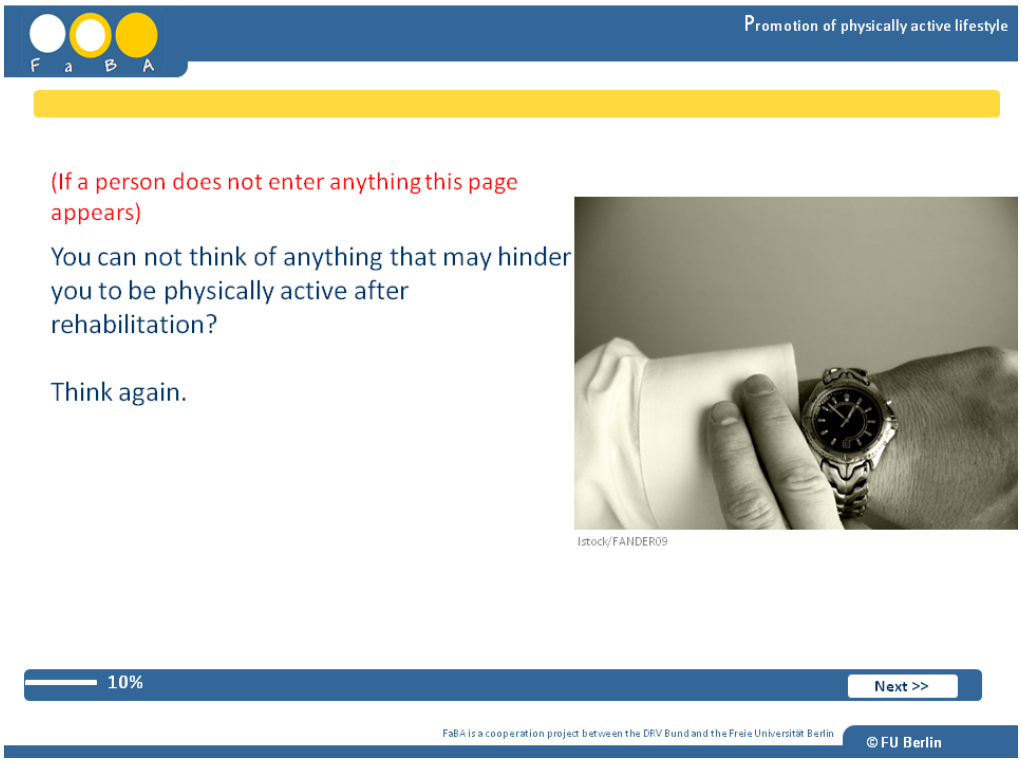
Promotion of physically active lifestyle
(If a person does not enter anything this page appears)
You can not think of anything that may hinder you to be physically active after rehabilitation?
Think again.
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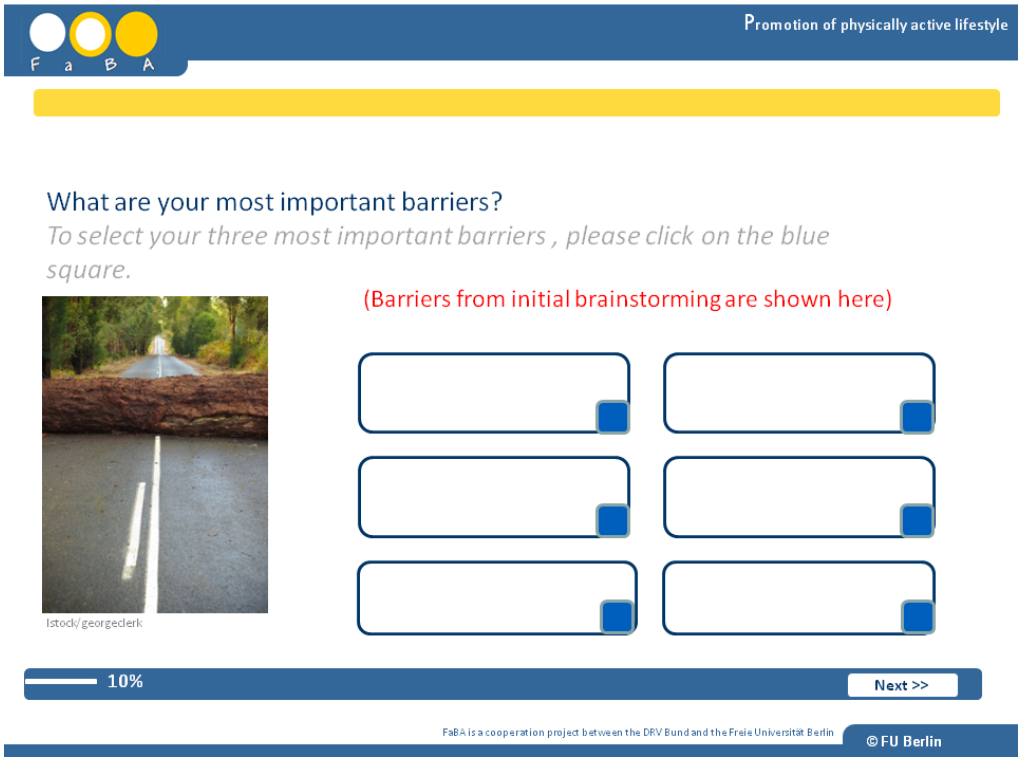
F a B A
Promotion of physically active lifestyle
What are your most important barriers?
To select your three most important barriers , please click on the blue square.
(Barriers from initial brainstorming are shown here)
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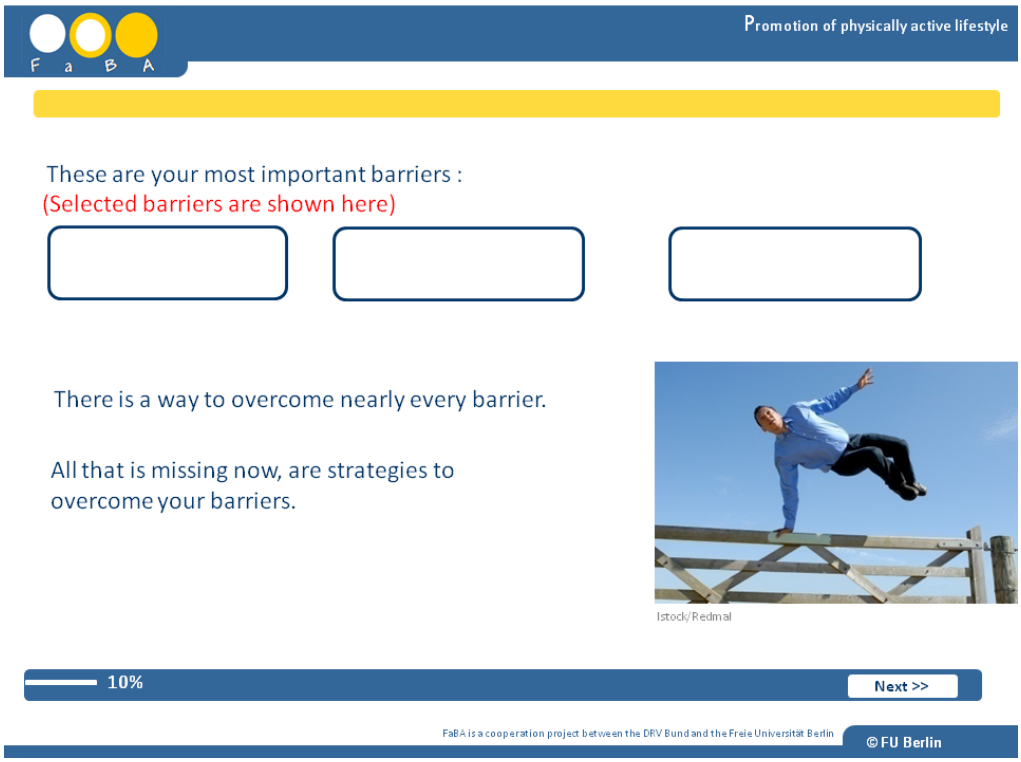
F a B A
Promotion of physically active lifestyle
These are your most important barriers :
(Selected barriers are shown here)
There is a way to overcome nearly every barrier.
All that is missing now, are strategies to overcome your barriers.
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Appendix B

Table 1. Linear regression results: Plan quality (two dummy variables) and quantity as predictors (T1) of post-rehabilitation quality of life and physical activity (T3) in n = 158 rehabilitation patients.

	Quality of life T3						Physical activity T3					
	Model 1		Model 2		Model 3		Model 1		Model 2		Model 3	
	β^1	p	β^1	p	β^1	p	β^1	p	β^1	p	β^1	p
Age	−0.18	0.03	−0.18	0.03	−0.18	0.03	-	-	-	-	-	-
Medical condition	-	-	-	-	-	-	−0.12	0.13	−0.12	0.13	−0.11	0.13
Severity of illness	−0.15	0.04	−0.14	0.04	−0.12	0.09	-	-	-	-	-	-
Baseline physical activity	−0.05	0.54	−0.06	0.43	−0.04	0.64	0.28	0.01	0.28	0.01	0.30	0.01
Baseline quality of life	0.12	0.15	0.13	0.12	0.14	0.08	-	-	-	-	-	-
Coping planning T1	0.14	0.07	0.14	0.07	0.13	0.09	0.17	0.03	0.17	0.03	0.16	0.03
Number of coping plans T1	-	-	−0.07	0.38	0.07	0.13	-	-	0.02	0.81	0.05	0.55
Instrumentality of coping plans T1					0.36	0.01					0.21	0.04
Dummy variable[a]												
Dummy variable[b]					0.26	0.04					0.13	0.09
R^2	0.10			0.11		0.15		0.14		0.14		0.16

[1]Standardized coefficients; medical condition was coded 0 = orthopedic condition; 1 = cardiac condition.

[a]Reference category was coded as zero and includes instrumentality ratings from 1 to 3 (see coding manual in Table 4, main manuscript); 1 refers to instrumentality ratings of 4 (i.e., highly instrumental plans).

[b]Reference category was coded as zero and includes instrumentality ratings 1, 2 and 4 (see coding manual in Table 4, main manuscript), 1 refers to instrumentality ratings of 3 (i.e., moderately instrumental plans).

Appendix C

Coding manual for ratings of coping plan content

Delivery of coping plan intervention module

During the *self-administered, web-based task at the end of rehabilitation (early recovery phase, T1)*, participants generated up to three web-based, user-specified coping plans for their physical activities after discharge from rehabilitation. For each of the three plans, participants formulated a barrier and a strategy to overcome it. A trained staff member from the research team was present to assist participants in case of technical or content-related questions and provided participants with a take-away summary of their plans. During the *telephone interview six weeks after discharge from rehabilitation (late recovery phase, T2)*, participants generated up to two user-specified coping plans for their physical activities. The interviewer (i.e., trained student research assistant) encouraged participants to consider their previous experience with implementing their planned physical activities. Similar to the self-administered task, interviewers then asked participants to formulate a barrier and a strategy to overcome it.

Completeness ratings: To rate the completion of coping plans, two independent raters awarded credits for the completion of the two coping plan components. One credit was given for each valid entry (i.e., non-missing, plausible answer) per barrier and per strategy. Participants could achieve up to a maximum of 2 credits per coping plan. Overall, participants could reach a maximum of 6 credits if they had fully completed all three plans for the self-administered task, and a maximum of 4 credits for the telephone-based tasks. No credits were granted for non-plausible/non-compliant answers (e.g., "lalala" for strategy). Answers such as "*I don't know"* were awarded with one credit.

Instrumentality ratings of strategies to overcome barriers

The instrumentality of self-generated coping plans was rated based on a coding scheme, systematically developed to evaluate *coping plan instrumentality.* Raters assessed each coping plan strategy on a multiple-point scale, ranging from 1 to 4: 1 ("obstructive" = strategy that does not support physical activity at all), 2 ("somewhat instrumental" = no immediate support of PA, but in the long-term), 3 ("moderately instrumental" = immediate support of PA, but only parts of it), 4 ("highly instrumental" = fully and immediately supports PA). If individuals came up with a coping plan strategy that entailed a modification of the original plan (e.g., change of time, location, behavior), their chances to act upon this newly formed if-then link were considered as lower compared to highly instrumental plans. In other words, coping plans that included a modification of the originally planned physical activity were rated as only moderately instrumental for goal pursuit (rated with a value of 3). In contrast, coping plan strategies that supported the tenacious pursuit of the originally intended activity were considered to have a higher chance of enactment (therefore rated as 4). Table 4 in the main manuscript summarizes the coding scheme and provides examples.