

Supplementary material:

Two types of questionnaires: multiple-choice and open-ended questions.

Part I demographic statistics

1. How many years have you worked in this region?

☐1~3 ☐3~5 ☐5~10 ☐over10 the years

2. Are you a PT or OT?

☐PT (Please continue to answer question 3)

☐OT (Please continue to answer question 4)

3. Please sort these fields by your clinical experience quantity. (Please fill 1 ~ 4 for more to less)

_Neurological _Orthopedic _Pediatric _Cardiopulmonary

4. Please sort these fields by your clinical experience quantity. (Please fill 1 to 3 for more to less)

_Physiological _Psychological _Pediatric

Part II survey about clinical applicability: rating scale item

Exterior and portability

1. How do you feel about this robot?

☐unsteady ☐sometimes unsteady ☐steady, but I'll still worry ☐steady ☐very steady

2. How do you feel about the portability of this robot?

☐It's hard to move ☐Sometimes it's hard to move. ☐I can move it, but still need practice ☐It's ease to move ☐Very portable

3. How do you feel about the exterior of this robot? ☐ugly ☐unattractive ☐average

☐good ☐beautiful

4. How do you feel about time spent on correction?

☐too long ☐long ☐nothing ☐shorter than expect ☐quite fast

5. How do you feel about equipping the assistance equipment on a patient's limb?

☐hard to operate ☐need some practice ☐easy ☐easy, and do not need any practice

☐ease to use, and fast

6. How do you feel about time spent on getting patient on the robot?

☐too long ☐long ☐nothing ☐shorter than expect ☐quite fast

7. How do you feel about operating procedures that get patients on the robot?

☐hard to operate ☐need some practice ☐easy ☐easy, and do not need any practice

☐ease to use, and fast

8. How do you feel about getting the patient off the robot?

☐hard to operate ☐need some practice ☐easy ☐easy, and do not need any practice

☐ease to use, and fast

9. How do you feel about the procedures changing the effect side of the robot?

☐hard to operate ☐need some practice ☐easy ☐easy, and do not need any practice

☐ease to use, and fast

10. How do you feel about the operating procedures of this robot?

☐hard to operate ☐need some practice ☐easy ☐easy, and do not need any practice

☐ease to use, and fast

11. How do you feel about operating instructions on the screen?

☐hard to understand ☐usually confuse ☐sometimes confused ☐I can understand it

without too much thinking ☐easy to understand

12. How do you feel about the touch screen?

☐always lag ☐a little bit lag ☐nothing ☐sensitive ☐ease to use

13. How do you feel about the troubleshooting procedures?

☐hard to operate ☐need some practice ☐easy ☐easy, and do not need any practice
☐ease to use, and fast

14. How do you feel about troubleshooting instructions on the screen?

☐hard to understand ☐usually confuse ☐sometimes confused ☐I can understand it
without too much thinking ☐easy to understand

15. How do you feel about the instructions reminding changing procedures?

☐hard to understand ☐usually confuse ☐sometimes confused ☐I can understand it
without too much thinking ☐easy to understand

16. How do you feel about the instructions for emergency stop?

☐hard to understand ☐usually confuse ☐sometimes confused ☐I can understand it
without too much thinking ☐easy to understand

17. How do you feel about using the robot for training drinking activities?

☐conventional therapy is better ☐similar to conventional therapy, but still not enough
☐having the same effect as conventional therapy ☐similar to conventional therapy,
and slightly better ☐way better than conventional therapy

18. What activities will you choose to train skills of drinking in conventional therapy?

☐PROM ☐PNF ☐shoulder arc ☐ring tree ☐nuts and bolts ☐cups pass ☐gripping ☐insert
board ☐claymore

19. How do you feel about using the robot for training dressing activities?

☐conventional therapy is better ☐similar to conventional therapy, but still not enough
☐has the same effect as conventional therapy ☐similar to conventional therapy, and
slightly better ☐way better than conventional therapy

20. What activities will you choose to train skills of drinking in conventional therapy?

☐PROM ☐PNF ☐shoulder arc ☐ring tree ☐nuts and bolts ☐cups pass ☐gripping ☐insert
board ☐claymore

21. How do you feel about using the robot to record motions of releasing tension?

☐not applicable ☐need some practice ☐nothing ☐applicable ☐ease to use

22. How do you feel about using the robot to release tension?

☐having the same effect as conventional therapy ☐similar to conventional therapy, and slightly better ☐way better than conventional therapy

23. How do you feel about allowing record time?

☐too short ☐a bit short ☐nothing ☐enough in most conditions ☐enough

24. How do you feel about the replaying trajectories of robots?

☐totally different from the recorded motion ☐a bit different from the recorded motion, and may drop the training effect ☐a bit different from the recorded motion, but acceptable ☐exactly replaying recorded motion, but a little more modifying assistance will be helpful ☐exactly replaying motions that I had in mind

25. How do you feel about the trajectories of the patient's limb led by the robot?

☐totally different from the recorded motion ☐a bit different from the recorded motion, and may drop the training effect ☐a bit different from the recorded motion, but acceptable ☐exactly replaying recorded motion, but a little more modifying assistance will be helpful ☐exactly replaying motions that I had in mind

26. How do you feel about the gravity compensation support of the robot?

☐it makes training harder than the conventional way ☐better not having the support ☐feeling nothing different with this function ☐it can ease my workload ☐very helpful

27. Is the record-replay function applicable in clinical?

☐unapplicable ☐conceptually applicable, but still need to improve for actual use ☐applicable ☐applicable, and developmental ☐applicable, and has high development prospect

28. Do you feel safe when getting the patient on the robot?

☐risk of hazard ☐not safe ☐safe, but need to pay attention to robot's movement ☐safe

☐very safe

29. Do you feel safe while training?

☐risk of hazard ☐not safe ☐safe, but need to pay attention to robot's movement ☐safe

☐very safe

30. Do you feel safe while correction?

☐risk of hazard ☐not safe ☐safe, but need to pay attention to robot's movement ☐safe

☐very safe

Part III: open-end question

1. Do you have any options about questions in the second part?

2. Do you have any suggestions for the development and improvement of the robot?