

Technology in Exercise-Based Cancer Rehabilitation –

A Cross-Sectional Study of receptiveness and Readiness for eHealth Utilization in Danish Cancer Rehabilitation

TRYGFONDENS
CENTER FOR

AKTIV SUNDHED



CENTER FOR
DIABETES

KØBENHAVNS
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Cancer rehabilitation challenges

- Increasing number of cancer survivors
- Difficult to maintain a physically active lifestyle after completion of cancer rehabilitation
- Some citizens (older/socially vulnerable) find it challenging to get into a rehabilitation center for the established group-based training programs

Digital Health Support

- Some citizens may benefit from alternative support for physical training through digitalization of health services (e.g. an exercise app)

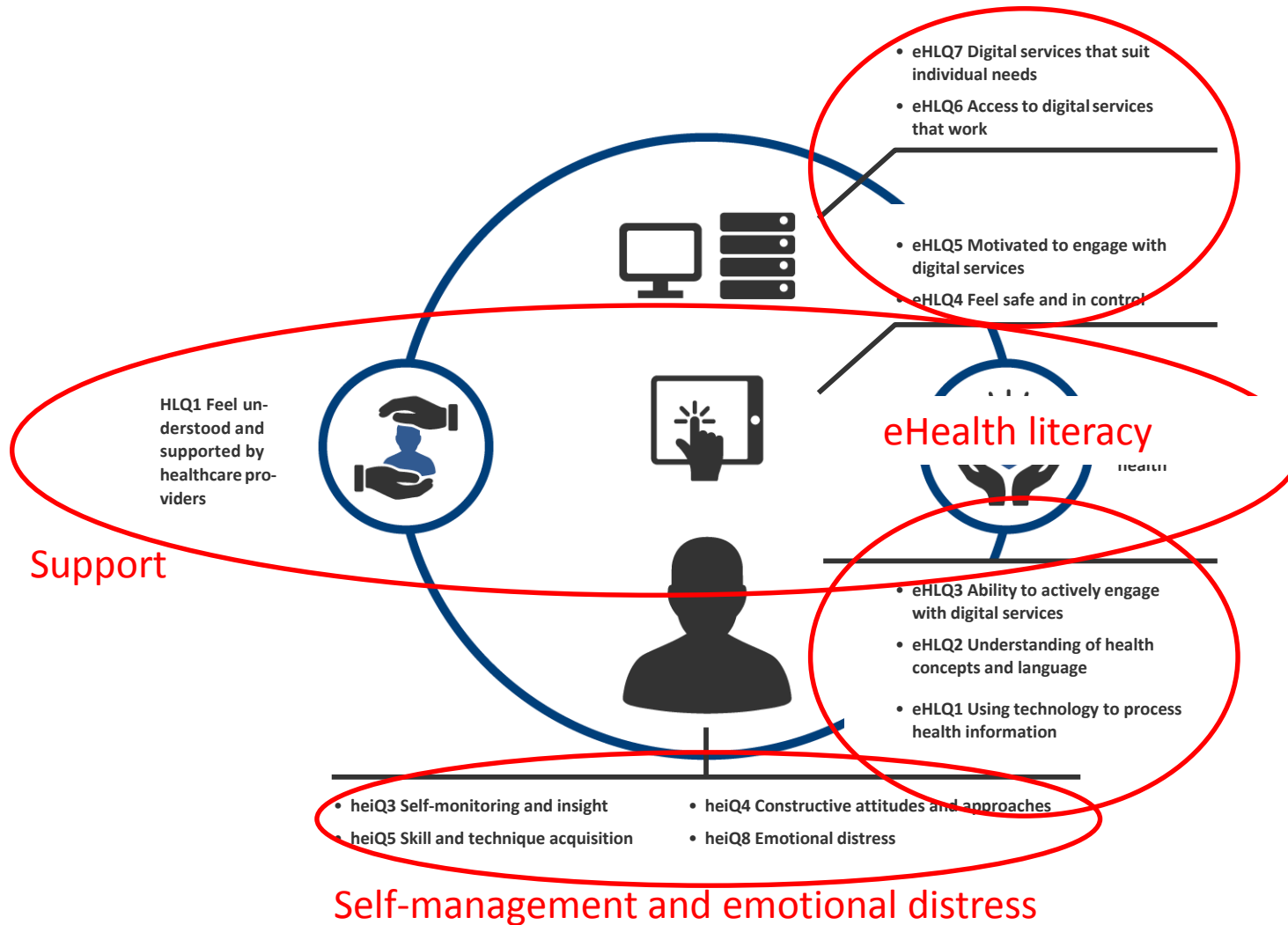
- Pilot study



eHealth literacy

'eHealth literacy includes a dynamic and context-specific set of individual and social factors, as well as consideration of technological constraints in the use of digital technologies to search, acquire, comprehend, appraise, communicate, apply and create health information in all contexts of healthcare with the goal of maintaining or improving the quality of life throughout the lifespan.'

READYHY - Readiness and enablement for health technology



How do we measure eHealth literacy/ health technology readiness?

- 65 item questionnaire covering 13 dimensions from 3 validated questionnaires:

eHealth literacy (7 dimensions)

Support (2 dimensions)

Self-management (4 dimensions)

- Answered on a scale of 1=Strongly disagree to 4=strongly agree

| | Angiv hvor enig eller uenig du er i følgende udsagn | Meget uenig | Uenig | Enig | Meget enig |
|----|---|--------------------------|--------------------------|--------------------------|--------------------------|
| 30 | Jeg har tillid til at de sundhedsprofessionelle anvender mine data på en passende måde. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 31 | Jeg synes at mine digitale tilbud stilles til rådighed på en måde der passer mig. | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |
| 32 | Det er nemt for mig at lære hvordan jeg skal | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> | <input type="checkbox"/> |

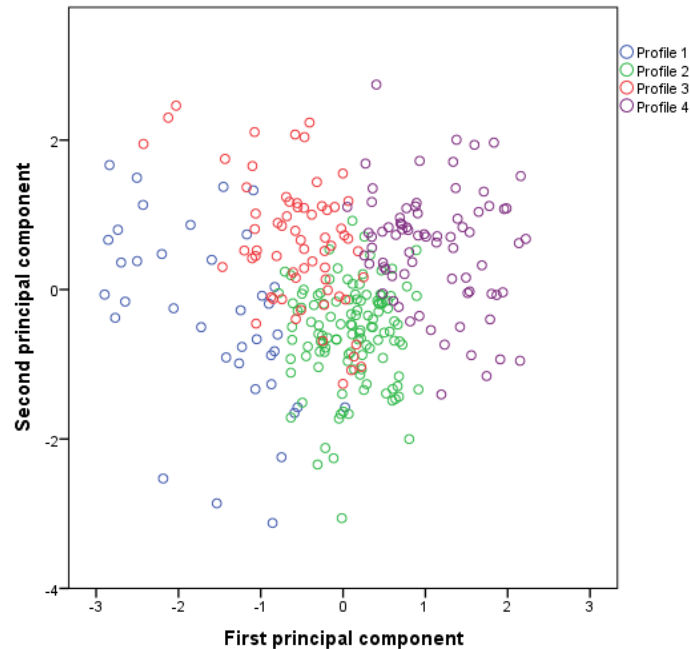
What can we use it for?

- Pick representative users' for the health technology development process (e.g. participatory design)
- Target interventions to match the competencies and needs of different users'

Results from the Copenhagen Centre for Cancer and Health

Cluster analysis

- Identification of groups of individuals that are more similar (in some sense) to each other than to those in other groups.



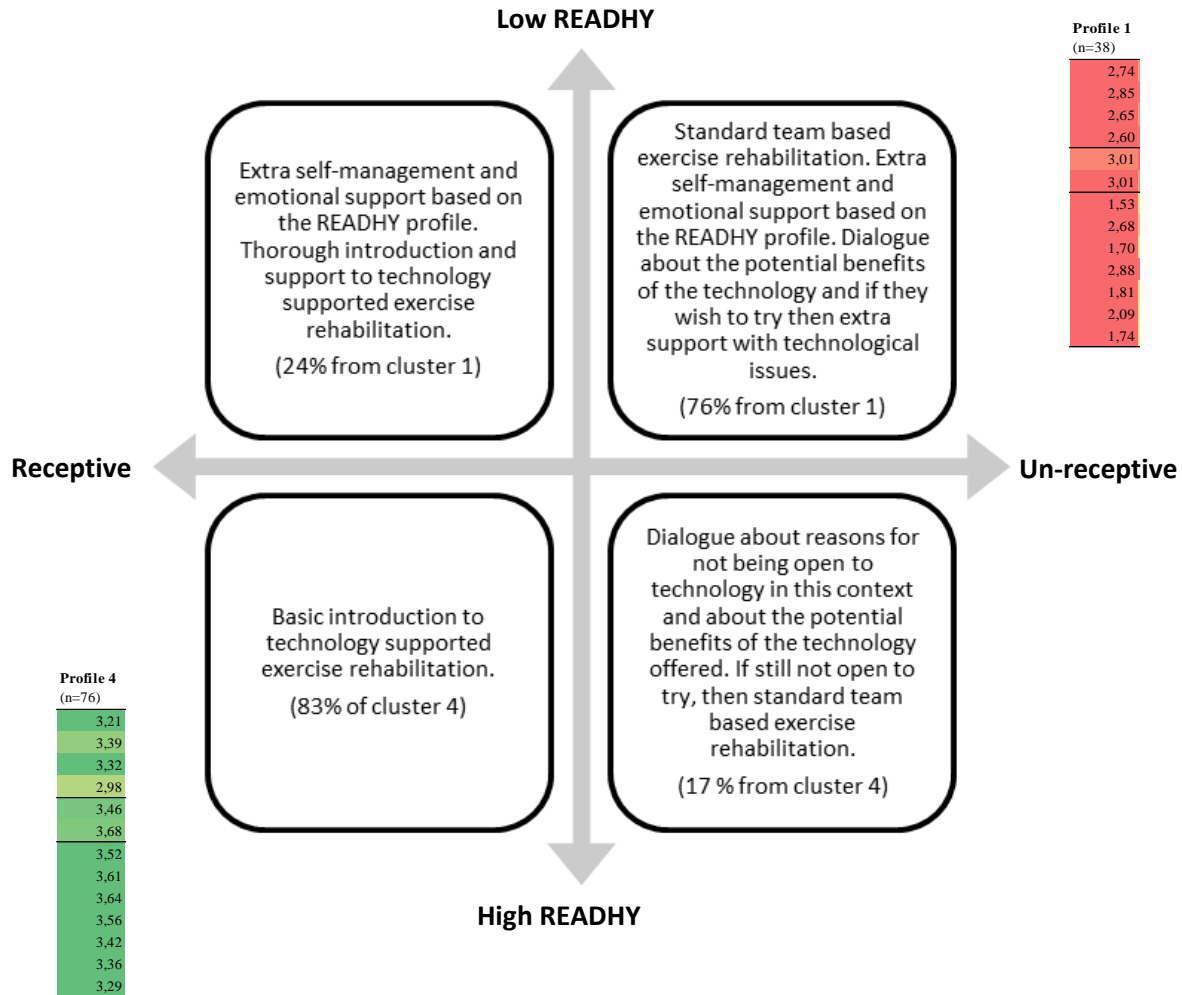
| | | Profile 1 (n=38) | Profile 2 (n=119) | Profile 3 (n=66) | Profile 4 (n=76) |
|-------------------------|--|----------------------------|-----------------------------|----------------------------|----------------------------|
| Self-management | heiQ3 Self-monitoring and insight | 2,74 | 2,83 | 3,15 | 3,21 |
| | heiQ4 Constructive Attitudes and Approaches | 2,85 | 2,88 | 3,51 | 3,39 |
| | heiQ5 Skill and technique acquisition | 2,65 | 2,79 | 3,25 | 3,32 |
| | heiQ8 Emotional distress | 2,60 | 2,62 | 3,18 | 2,98 |
| Support | HLQ1 Feeling understood and supported by HCPs | 3,01 | 2,94 | 3,50 | 3,46 |
| | HLQ4 Social support for health | 3,01 | 3,19 | 3,74 | 3,68 |
| eHealth literacy | eHLQ1 Using technology to process health information | 1,53 | 2,75 | 2,31 | 3,52 |
| | eHLQ2 Understanding of health concepts and language | 2,68 | 2,91 | 3,18 | 3,61 |
| | eHLQ3 Ability to actively engage with digital services | 1,70 | 3,00 | 2,89 | 3,64 |
| | eHLQ4 Feel safe and in control | 2,88 | 2,90 | 3,21 | 3,56 |
| | eHLQ5 Motivated to engage with digital services | 1,81 | 2,65 | 2,35 | 3,42 |
| | eHLQ6 Access to digital services that work | 2,09 | 2,74 | 2,77 | 3,36 |
| | eHLQ7 Digital services that suit individual needs | 1,74 | 2,60 | 2,42 | 3,29 |

heiQ8 is reversed: a high score means less distress

Scale: 1. Strongly disagree – 4. strongly agree

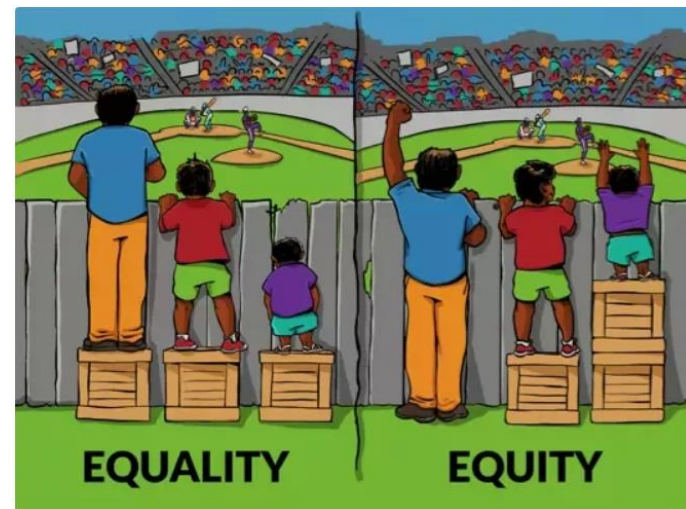
| | CKSK | | | |
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| | | | | | p-value |
|---|------|------|------|------|---------|
| Can imagine supplementing exercise with technology, % | 24 | 83 | 64 | 84 | <0,001 |
| Age, mean | 67,8 | 58,1 | 58,1 | 53,9 | <0,001 |
| Highest completed education comprehensive school, % | 24 | 9 | 9 | 7 | 0,021 |
| Live alone, % | 66 | 35 | 33 | 36 | 0,004 |
| Has +2 Chronic conditions besides cancer, % | 40 | 19 | 14 | 16 | 0,003 |
| Smoking, % | 21 | 4 | 12 | 4 | <0,001 |
| Smartphone ownership, % | 42 | 89 | 79 | 92 | <0,001 |
| Use technology in connection with exercise, % | 0 | 16 | 18 | 37 | <0,001 |
| Use technology for information seeking, % | 42 | 97 | 94 | 95 | <0,001 |



Conclusion

- When introducing health technology it is important to take into account end users' competences in order to leverage different types of users according to their skills and needs.



Thank you!