EFFICHRONIC: Effect evaluation

WP-6

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effichronic

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Objectives

Main objective:

To appraise the CDSMP intervention in terms of benefits for the target population

Four research questions:

1.	What are the benefits of the CDSMP intervention for the target population in terms of self-management, healthy lifestyle, depression, sleep and fatigue, adherence to medication and health-related quality of life (HR-QoL)?	*Comparable to SEFAC*
2.	What are the effects of the CDSMP intervention for the target population on health literacy, communication with healthcare providers and prevalence of experienced medical errors?	*Extra*
3.	What are the societal cost savings of the CDSMP intervention in terms of reducing healthcare utilization and productivity losses among the target population?	*Comparable to SEFAC*
4.	To what extent is the target population satisfied with the CDSMP intervention as a whole as well as with specific elements?	*Comparable to SEFAC*

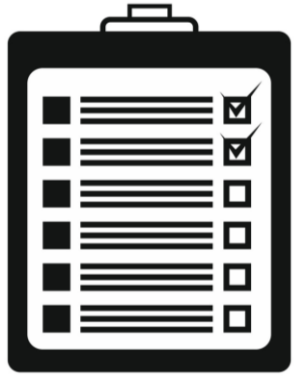
Data collection overview

2759

Engaged participants (engaged = attended at least 1 session)

2277

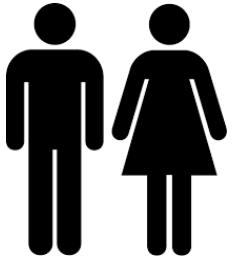
Completed participants (=attended at least 4 of the 6 sessions)



1825 valid baseline questionnaires

1189 valid follow-up questionnaires

Participant characteristics



67.5% female

32.5% male

Mean: 61 y

SD: 14.9

Examples of differences between the 5 pilot sites:

Younger participants in **NL** and **FR**

Female participants:

50% in **UK** to 80% in **IT**

Participants living alone:

around 25% in **UK + SP** to 46% in **FR**

Education and income:

lowest level in **SP**

Not working participants:

around 55% in **NL + IT** to 21% in **FR**

Results – objective 1

What are the benefits of the CDSMP intervention for the target population in terms of self-management, healthy lifestyle, depression, sleep and fatigue, adherence to medication and health-related quality of life (HR-QoL)?

	n (paired)	Baseline	Follow-up	P-value
Self-efficacy				
SEMCD-6 (score range 1-10)	1073	6.70±2.15	6.99±2.06	**<.001**
Lifestyle factors				
Physical exercise				
Stretching/strengthening (min/wk)	1091	35.58±61.14	36.58±56.61	0.571
Aerobic exercise (min/wk)	1173	150.82±123.14	153.57±126.44	0.427*
Walk for exercise (min/wk)	*1143*	95.25±66.78	92.82±66.87	0.229*
Swimming or aquatic exercise (min/wk)	*1048*	*8.40±30.47*	*11.16±34.96*	**0.008**
Bicycling (min/wk)	*1061*	*22.78±48.62*	*25.22±51.98*	*0.052*
Other aerobic exercise (min/wk)	*1068*	*30.24±61.89*	*29.27±61.69*	*0.633*
Sedentary behaviour (week day) (min/wk)	1069	5.99±3.31	5.65±3.07	**<.001**
Sedentary behaviour (weekend day) (min/wk)	1075	5.78±3.23	5.44±2.86	**<.001**
Fruit, >1 portion/d	1171	609(52.01)	582(49.70)	0.109
Vegetables, >1 portion/d	1162	438(37.69)	447(38.47)	0.633
Having breakfast, >5 d/wk	1141	918(80.46)	920(80.63)	0.940
Alcohol, 2 times/wk or more	1168	282(24.14)	246(21.06)	**0.002**
Smoking, yes	1147	157(13.69)	156(13.60)	1.000
Depressive symptoms (PHQ-8 ≥10)	1028	248(24.12)	210(20.43)	**0.007**
Sleep problems (score range 0-10)	1161	4.41±3.02	4.44±3.06	0.760
Fatigue (score range 0-10)	1150	4.77±3.04	4.67±2.98	0.160
Medication adherence (SMAQ), no adherence	877	501(57.13)	479(54.62)	0.189
Health-related Quality of Life (HR-QoL)				
PCS Score (SF-12; score range 0-100)	1006	43.7±11.3	44.7±10.9	**<.001**
MCS Score (SF-12; score range 0-100)	1006	43.6±10.1	45.0±9.4	**<.001**
EQ-5D-5L utility values	1147	0.69±0.26	0.71±0.26	**0.002**
EQ-5D-5L Overall health (score range 0-100)	1136	67.81±21.47	70.55±20.25	**<.001**

Results – objective 2

What are the effects of the CDSMP intervention for the target population on health literacy, communication with healthcare providers and prevalence of experienced medical errors?

	n (paired)	Baseline	Follow-up	P-value
Health literacy (HLQ)				
Ability to find good health information (score range 1-5) ‡	721	1.93±0.81	1.87±0.74	0.060
Understand health information well enough to know what to do (score range 1-5) ‡	737	1.94±0.77	1.84±0.73	**0.001**
Communication with healthcare providers (score range 0-5)	962	2.05±1.24	2.22±1.31	**<.001**
Prevalence of **experienced medical errors**				
Your healthcare provider did not explain this in a way you understood, % yes	973	324(33.30)	283(29.09)	**0.017**
Personally experienced a medical error in your own care, % yes	908	245(26.98)	170(18.72)	**<.001**
The medical error is a minor/major problem for you, % yes	143	122(85.31)	115(80.42)	0.248

‡ *A lower score is better.*

Results – objective 3

What are the societal cost savings of the CDSMP intervention in terms of reducing healthcare utilization and productivity losses among the target population?

Cost-effectiveness analysis with a time horizon of 6 months

1. Healthcare perspective
2. Societal perspective

Objective 3

Healthcare perspective

This perspective takes healthcare costs into consideration

Table on the resource use of participants of the CDSMP intervention at T0 and T1

	n (paired)	T0	T1	P-value*
Doctor appointments	1120	4.35±5.98	3.17±4.52	**<0.001**
Hospital emergency room visits	1139	0.42±2.07	0.24±0.77	**0.002**
Hospitalised nights	1111	0.83±4.12	0.48±2.77	**0.005**

Calculations using unit prices of the three resources →
Estimated saving of healthcare costs →
Average saving for the 5 pilot sites was 307 euro per participant

Objective 3

Societal perspective

- This perspective takes productivity losses into account
  - Lost productivity at paid work due to absenteeism
  - Lost productivity at unpaid work

Paid work:

Calculations using number of hours absent from work due to illness & hourly cost prices → Estimated saving of productivity costs →

Average saving for the 5 pilot sites was 206 euro per participant

Unpaid work:

Calculations using number of hours required to take over the unpaid work unable to do & hourly cost prices → Estimated saving of productivity costs →

Average saving for the 5 pilot sites was 267 euro per participant

Combined:

Average saving for the 5 pilot sites was 473 euro per participant

Objective 3

both perspectives

Healthcare perspective:

- a decrease in healthcare costs (=saving) of 307 euro per participant

Societal perspective:

- a saving in productivity costs (=saving) of 473 euro per participant

Combined:

- The weighted average shows

a saving in productivity costs (=saving) of 780 euro per participant

Results – objective 4

To what extent is the target population satisfied with the CDSMP intervention as a whole as well as with specific elements (problem solving, decision making, and confidence building)?

Results – objective 4

- Majority of participants did at least one activity to improve health (85%)
- Around half of participants reported that CDSMP helped them to improve ability to make decisions and express themselves; and that CDSMP improved communication with others
- 46% reported higher confidence in understanding of their needs by the health system
- Average satisfaction score (scale 0-10): 8.3 ± 1.7

Discussion

Strengths	Limitations
Five distinct regions within EU countries	Recruitment of persons with low SEP was challenging
First EU study aiming to implement an evidence-based intervention specifically in vulnerable persons with a low SEP	Topics in questionnaire were limited and outcome measures were self-reported → potential bias
Study provided insight into societal cost savings resulting from a reduction in healthcare utilization and in productivity losses	Cost-effectiveness analyses should be interpreted with caution due to low numbers of cases and difficulty to find adequate estimates of the costs

Conclusion

- The 6-month CDSMP intervention in persons with a chronic disease with a low SEP or their caregivers showed benefits on several relevant outcome measures: self-management, swimming, sedentary behaviour, alcohol use, depressive symptoms and HR-QoL.
- Health literacy, communication with healthcare providers and experienced medical errors also improved.
- The intervention resulted in a mean saving of 780 euro in societal costs per participant.
- Participant satisfaction with the CDSMP intervention was high.

- Overall, findings are comparable to those of the SEFAC program.

Thank you!

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