Katriina Kukkonen-Harjula

Integrating research into practice to develop physical activity counseling in Finnish health care centers
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Katriina Kukkonen-Harjula
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Funding: The Finnish Ministry of Social Affairs and Health
Background

Physical Activity Prescription (PAP) in Finland

- development in 2001-4
- includes a prescription form
- has proved feasible and effective in promoting physical activity (PA) in routine physician appointments
Physical Activity Prescription Program (PAPP)

2001-4

Finnish Rheumatism Association • Fit for Life Programme • Finnish Medical Association • Finnish Heart Association • Research Centre for Health Promotion/University of Jyväskylä • UKK Institute for Health Promotion Research
RCT on effectiveness & feasibility

A randomized intervention of physical activity promotion and patient self-monitoring in primary health care

Minna Aittasalo, Seppo Miilunpalo, Katriina Kukkonen-Harjula, Matti Pasanen

Objective: To examine the effectiveness of prescription-based counseling and self-monitoring in the promotion of physical activity in primary health care.

Methods: The study was conducted in Finland during 2003–2004. Physicians from 24 health care units (N = 67) were randomized to a prescription or a non-prescription group. The patients (N = 265) were assigned to the groups according to their physician. Every other patient of the non-prescription physicians received a pedometer and a physical activity log (MON) and feedback about their 5-day recordings, the rest served as controls (CON). PA was assessed prior and 2 and 6 months after the physician’s appointment with a questionnaire.

Results: The mean increase in weekly physical activity at 2 months was 1.9 (95% CI 0.0 to 2.8) session more in the prescription group than in controls. In at least moderate-intensity physical activity, the mean difference in changes was 0.8 (95% CI 0.1 to 1.5) sessions at 2 months and 0.9 (95% CI 0.2 to 1.5) sessions at 6 months for the favor of the prescription group. Compared to controls, self-monitoring increased the weekly duration of overall PA at 2 months on average by 217 min (95% CI 23 to 411).

Conclusions: Prescription can be recommended as a tool for primary health care physicians to promote physical activity. Self-monitoring with an expert feedback can be useful in increasing especially the weekly duration of overall physical activity in the short term.

Abstract

Introduction

There is increasing evidence about the benefits of physical activity (PA) in the prevention and treatment of major public health diseases [4,10,25,35]. Still, less than half of the adult population in most developed countries fulfills the recommendation of sufficient PA for purposes of health [25,37].

During the last decade, encouraging results about the effectiveness of physician-delivered counseling have been achieved to increase PA of sedentary persons [6,12,14,17,26,30,32]. However, the effects seem to dilute in the long term, which is presumed to arise from the physicians’ inability to integrate the key components of counseling, such as control visits and cowork with other health staff, to the counseling procedure [34]. Self-monitoring has also been brought up as a method for PA promotion especially after the development of accurate electronic pedometers [33]. Pedometers are easy to use, inexpensive and less time consuming than counseling based on conversation. The use of such devices can have a positive influence on PA at least in the short term [8,31,41].

This randomized controlled trial examines the feasibility and effectiveness of prescription-based PA counseling by physicians, “Prex” (Fig. 1), developed and piloted in Finland during 2001–2002 [21]. To gain information about the effects of a less time consuming method, self-monitoring with a pedometer and PA log was also studied.

Subjects and methods

Recruitment of health care units and physicians

Municipal primary health care centers (PHC) and occupational outpatient health care units (OHC), both private- and community-owned with more than four physicians and within the reach of less than 2 h traveling time from the
From innovation to practice: initiation, implementation and evaluation of a physician-based physical activity promotion programme in Finland

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1The UKK Institute for Health Promotion Research, Tampere, Finland. 2KiiPala Rehabilitation Centre, Turenki, Finland. 3Tampere School of Public Health, University of Tampere, Tampere, Finland and 4National Research and Development Centre for Welfare and Health (STAKES), Helsinki, Finland

SUMMARY
In 2001, a collaborative Physical Activity Prescription Programme (PAPP) was started in Finland to increase physical activity (PA) counselling among physicians, especially in primary care. This article describes the initiation, implementation and evaluation of PAPP.

Five actions were implemented to reach the programme goal: (i) developing a counselling approach for physicians; (ii) providing easy and open access to counselling material; (iii) facilitating physicians’ uptake and adoption of the counselling approach; (iv) disseminating information about the counselling approach to physicians, health and exercise professionals and decision-makers and (v) raising financial resources to cover programme expenses. Evaluation was based on the dimensions of the RE-AIM framework: reach, effectiveness, adoption, implementation and maintenance. Effectiveness and adoption were evaluated with two questions added to the annual survey of the Finnish Medical Association to all practising physicians in the year 2002 (n = 16,692) and 2004 (n = 17,170).

The 4-year PAPP was successful in reaching health care units (Reach), accomplishing most of the implementation actions (Implementation) and initiating local projects for institutionalizing the prescription-based counselling approach, ‘Prex’ (Maintenance). However, at the national level, the programme was not effective in increasing the frequency of asking about patients’ PA habits (Effectiveness) or the frequency of using ‘Prex’ or other written material in PA counselling among physicians (Adoption).

To improve the latter two, the duration of the programme would have had to be extended with more effort at strengthening physicians’ confidence in PA counselling and knowledge about its effectiveness. Also, a more systematic approach would have been necessary to facilitate inter-sectoral network for adopting ‘Prex’ as a counselling tool at the local level.

Key words: physical activity; promotion; primary health care; dissemination

INTRODUCTION
In 2001, a collaborative Physical Activity Prescription Programme (PAPP) was started in Finland to increase physical activity (PA) counselling among physicians, especially in primary care. The ultimate aim of the programme was to promote the health-enhancing PA (U.S. Department of Health and Human Services, 1996) of sedentary patients thereby preventing and reducing possible health problems related to physical inactivity. Physicians’ role was emphasized, because (i) their services were used by 82% of the population yearly (Helakorpi et al., 2005); (ii) fewer than 30% of physician appointments included PA counselling according to...
Promoting Physical Activity of Working Aged Adults with Selected Personal Approaches in Primary Health Care

Feasibility, Effectiveness and an Example of Nationwide Dissemination

Minna Aittasalo

University of Jyväskylä
2008

health education

Conclusions

• PAP is feasible and effective in promoting PA in routine physician appointments

• more local efforts to facilitate adoption of PAP among health care providers
Actions in 2004-9 by UKK Institute

- Training of health & exercise professionals
- Integration of PAP to national electric patient record system - ongoing!
  Patient core information
- Updating of PAP material
  PAP form internet pages
- Linking PA & PAP to relevant clinical guidelines
  Current Care - physical activity 2008 (2010)
  www.kaypahoito.fi/web/english

Physical activity and exercise training in the prevention, treatment and rehabilitation of diseases
Contents of PAP form - structure

- present PA
- health basis or goal for PA
- readiness for change
  - willingness & opportunities
- modes of PA
  - lifestyle activities preferred
- frequency, duration, intensity
- additional instructions
- monitoring & evaluation
### 5A's principle

#### Assess & Advise
- current PA
- readiness to increase PA
- PA guidelines
- benefits of increasing PA

#### Agree & Assist
- individual PA goal
- weekly PA plan
- sitting
- additional instructions
- co-operation

#### Arrange
- systematic support
- monitoring & evaluation

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**Physical Activity Prescription for Adults**

<table>
<thead>
<tr>
<th>Endurance physical activity</th>
<th>Days per week</th>
<th>Hours per week</th>
<th>Minutes per week</th>
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<tbody>
<tr>
<td>light intensity, getting slightly out of breath</td>
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<td>vigorous, getting strongly out of breath</td>
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</table>

| Muscular training | | | |
|-------------------|------------------|------------------|

| Balance and/or agility training (especially when over 65 years) | | | |
|-----------------------------------------------------------------|------------------|------------------|

**Sufficiency for health**
- sufficient
- insufficient

**Breaking sitting every 2 hours**
- yes
- no
- not possible

**Goal for physical activity**

**Action plan**

<table>
<thead>
<tr>
<th>Mode of physical activity</th>
<th>Days per week</th>
<th>Minutes per day</th>
<th>Intensity</th>
<th>Borg scale (6–20)</th>
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</table>

**Additional instructions of referral to**
- Leaflet
- Name of the professional
- Other

**Follow up**
- Visit
- Telephone
- E-mail

**Provider’s name and signature**
Physical Activity Prescription for Adults

Name: ___________________________ Date: ___ / ___ / ___

Current regular physical activity

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Muscular training

Balance and/or agility training (especially when over 65 years)

Sufficiency for health

☐ sufficient ☐ insufficient

Breaking sitting every 2 hours

☐ yes ☐ no ☐ not possible

Goal for physical activity

________________________________________________________________________

________________________________________________________________________

________________________________________________________________________
Action plan

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Additional instructions of referral to

☐ Leaflet ____________________________

☐ Name of the professional ____________________________ tel. ____________________________

☐ Other ____________________________

Follow up

Name of the professional ____________________________ tel. ____________________________

☐ Visit _____ / _____ / _____ at _____ : _____

☐ Telephone _____ / _____ / _____ at _____ : _____

☐ E-mail _____ / _____ / _____ Client’s e-mail ____________________________ @

Provider’s name and signature ____________________________
Minna Aittasalo, Turku 3.11.2011

User’s guide

Liikkumisreseptin käytäntöohje

Nimi
Kirjoita reseptiin asiakkaan nimi. Se korostaa reseptin henkilökohdasta ja reseptistä muodostuu yhdessä alatarkkoja tuoksui kanssa yhteenliitun sopimus asiakkaan kanssa.

Nykyinen säännöllinen liikkuminen

Liikkumisen riittävyyss terveyden kannalta (vertaa UKK-liikuntapirakka)
Riittävää, jos riipeää ja rasittavaa kestävyysysteppistä liikkumista on yhteensä vähintään 30 minuuttia (2 tuntia 30 minuuttia) viikoessa ja tuntui erityisesti kolmien viikon päivällä ja lihaksentornharijoiteluella ja ketteryyssä liikuntakanta on vähintään kahdesti viikossa.

Liikkumisen kiinnostus

Voimakasta hengistymistä

PA intensity: RPE scale (Borg)

Miten rasittavalta liikkuminen tuntuu juuri nyt?

6  erittäin kevyt
7
8
9  hyvin kevyt
10
11  kevyt
12
13  hieman rasittava
14
15  rasittava
16
17  hyvin rasittava
18
19  erittäin rasittava
20  en jaka enää

Ei juurikaan hengistymistä
Vähän hengistymistä
Borgin asetelma saadaan tietoa liikkumisen koetusta rasittavuudesta. Voimakas fyysinen raivosuus ja suurin koettu rasittavuus lisäävät sydämen ja verenkiertoelämisestä toimintahäiriöiden sekä liikuntakeskustelun valmennuksen vaaras. Suuri koettu rasittavuus voi myös vähentää liikkumisen melyyttävyyttä ja siten aloittelevan kiinnostusta säännölliseen liikkumiseen.

LIIKKUMISEN
viikko-ohjelma ja seuranta

Nimi ____________________________

Pvm. ____________________________

• Suunnitellun liikkumisen on tärkeää terveytesi kannalta.
• Jos et ole aiemmin liikkunut, liikut valinnatonasesi tai
  ajoitteled liikkumistasi uudelleen, oman viikko-ohjelman
  taattimen voi auttaa sinuut liikkumisen alkuun.

Tarkempia viikko-ohjelman täyttöä koskevia neuvoja saat
esimerkiksi terveysapua, fysioterapiaa tai liikuntatoimien
liikkumivistä. Ne ovat myös liikkutietoa liikkumisesta ja
sinulle soveltuista liikuntapalveluista.

Kortin

SUVARITTELUN
UKK-instituutti
PL 32, 33501 Tampere
puh. 040-2629 111
faksi 040-2629 200

Kortin talletus
nuosta www.ukkinstituutti.fi
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TOTEUTUMINEN (kalenteriviikot)

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</tbody>
</table>

* krev = eis juuri kannan hengitystistä, ripo = eis kin verran hengitystistä, rasittava = voimakasta hengitystistä

Follow-up

card
Development project in 2010-3 to improve PA counseling practices, uptake of PAP and collaboration in municipal health care

aims -- health care providers

1) to increase knowledge about PA & health, & behavioral counseling
2) to increase PA counseling & its documenting in electric patient records
3) to improve counseling practices by facilitating the uptake of PAP
4) to enhance collaboration between counseling providers
Actions to improve PA counseling practices, uptake of PAP and collaboration

4 health care centers (municipalities)

- Whole staff training PA & health, PA counseling, PAP & conclusion meeting
- Responsible team in each center
- Multiprofessional teams select target groups & actions
- Researcher supports the teams in implementation for 6 months with 4 tutor visits & e-mail consultations & tasks
Tool kit for PA counseling

• an updated PAP form
  also in English

• a manual
  assessment questionnaires
  logs

to guide multiprofessional teams through the process
“PA counseling into action”

Liikuntaneuvonta yhteiseksi asiaksi

LIIKKUMISRESEPTI KÄYTTÖÖN

manual for PAP uptake

www.ukkinstituutti.fi/liikkumisresepti (in Finnish)
Evaluation at baseline & after follow-up

1) questionnaire to providers
   attitudes, knowledge, current counseling, use of PAP, documentation of PA, collaboration

2) providers’ logbooks about patient visits
   bringing up PA, implementing PA counseling, use of PAP, documentation of PA in patient records

3) questionnaire to patients
   discussion about PA, frequency of PA counseling, delivery of PAP

4) telephone interview of municipal exercise service providers
   collaboration with health care professionals

5) a sample of appointment documentation in the patient record system
   documentation of PA counseling
Working phases

1st phase
getting started

2nd phase
baseline assessm.

3rd phase
identification

4th phase
planning

5th phase
implementation

6th phase
checking

7th phase
final assessm.

8th phase
continued planning
Liikuntaneuvonnan kysely

questionnaire to providers

Liikuntaneuvonnan kirjanpitolomake

providers’ logbooks
Main outcomes -- health care providers

- knowledge about PA and health
- frequency and contents of PA counseling
- frequency of using PAP concept
- frequency of documenting PA counseling in patient records
- collaboration with exercise service providers municipal, private & third sector
Process evaluation

based on meeting minutes of

- team meetings
- tutor meetings with the teams
<table>
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</table>
Further actions in 2013-4

assessment of the utilization of the tool kit by multiprofessional teams in 3 health centers
Conclusions

- diffusion of innovations is slow
- resource & time pressures in health centers
  huge organizational reforms ahead
- PA counseling as a "neutral" example of behavioral counseling