Title

Physical activity (PA) on prescription

Short description

The goal of this intervention is to change the inactive lifestyle of adults with health condition(s) (i.e., overweight, psychosomatic problems, cardiovascular diseases, diabetes) into a sustainable, more active lifestyle to improve the physical and mental health as well as social cohesion. The intervention especially targeted disadvantaged adults to close the health equity gap.

The 'physical activity prescription' programme includes a referral from the general practitioner, counselling sessions by a physical activity coach (using among others motivational interviewing techniques, goal setting via a physical activity plan, feedback), and the organization of low-threshold activities by community health centers/local sports and recreational organizations (if not yet available).

The intervention consists of three major components:

(1) a PA prescription by a physician,
(2) the development of a personal PA plan during the first face-to-face contact with a personal PA coach and,
(3) two face-to-face follow-up consultations with the personal PA coach.

Based on the results, this intervention seems to be an effective strategy to initiate an increase in physical activity and quality of life in disadvantaged adults.

Topic

Moving – Active mobility

Characteristics (type, level)

Regional
Intervention

Country/Countries of implementation

Belgium

Aims and Objectives

The goal of this intervention is to change the inactive lifestyle of adults with health condition(s) (i.e., overweight, psychosomatic problems, cardiovascular diseases, diabetes) into an sustainable, more active lifestyle to improve the physical & mental health as well as social cohesion. The intervention especially targeted disadvantaged adults to close the health equity gap.

Target Group

Inactive and sedentary adults. Particular attention was paid to reach disadvantaged adults.

Status

Implemented on a continuous basis

Start and Completion dates

The project started in 2010 and is still going on given that it is implemented on a continuous basis.

Lifestyle and Behavior Change

The 'physical activity prescription' programme includes a referral from the general practitioner, counselling sessions by a physical activity coach (using among others motivational interviewing techniques, goal setting via a physical activity plan, feedback), and the organization of low-threshold activities by community health centers/local sports and recreational organizations (if not yet available).

The included components of this intervention have been shown to successfully affect participants' physical activity, health, and quality of life indicators.

Effects on:

Health and Wellbeing	The included components of this intervention have been shown to successfully affect participants' physical activity, health, and quality of life indicators. Based on a study of Ghent University (see appendix PhD Veerle Dubuy – pages 77-92), intervention effects were found on moderate intensity & total weekly physical activity, perceived health, sleep quality, feelings of depression, feelings of happiness, energy level, and pain complaints.

Vulnerable populations	A recent report (in Dutch) stated that the 'PA on presciption' reached 64.9% participants with solely a secondary school degree (64.9%), 27.1% with a high school degree, and 18.4 % with a university degree. Moreover, the programme was able to reach 26.3% disabled persons and 18.3% unemployed persons. In addition, people with a very low income have a special statute in which they received higher reimbursement (HR). 17% of the population in the pilot region had the statute HR. This practice reached 37% participants with the statute HR.
Environment	When drawing the PA plan, the PA coach looks at PA in different areas: home, work, free time and active transport. Consequently, active transport is also promoted in this intervention. However, there are no studies that looked into the effects on environmental indicators.

Initiated and/or implemented by

The practice was initiated by the Regional Institute for Community Development (Riso) Vlaams-Brabant and a community health center in Leuven in 2010. It was initiated to comply with the needs of disadvantaged adults with higher health risks that indicated many barriers for being physically active.
The last years, the initiative has grown via (financial) support of the Flemish Government.

Stakeholders and sectors involved

- Welfare sector: Community development organisations, Center for social welfare (OCMW)
- Organizations that support low SES groups: integration service,…
- Health sector: Public Health authorities, general practitioners, community health centers, health insurance companies, VIGeZ, LOGO
- Organizations that could contribute to physical activity: Local sport & cultural authorities, sport organisations, socio-cultural organisations, bike share systems, shared gardening
- Flemish Government - Agency Welfare & Health
- Local Governments

Financial support

The Flemish Government provided +/- 4.5 million Euro for 5 years (until 2020). This financial support is for the following expenses:

- A large part for the payment of the coaches. A small part is paid by the participant,
- A financial incentive for each region,
- A registration and payment system

VIGeZ coordinates the implementation of physical activity on prescription and will pay for:

- The Flemish coordination,
- Education of coaches,
- Intervision of coaches,
- Promotion and promotion material

Domus Medica will support general practitioners, they will teach groups of general practitioners about physical activity on prescription.

LOGO will support each application.

VIGeZ, Domus Medica en Logo are all funded by the Flemish Government.

A more detailed financial plan can be provided if necessary.

Evidence-base

The intervention is based on the principles of goal-setting theories and self-regulation theories (Bartholomew, Parcel, Kok & Gottlieb, 2001, Intervention Mapping).

In addition, several international studies also support this practice and indicate the cost-effectiveness of this practice in other countries.

- Baumann S, et al. The long-term effect of screening and lifestyle counseling on changes in physical activity and diet: the Inter99 Study - a randomized controlled trial. Int J Behav Nutr Phys Act 2015;6;12:33.
- Eriksson MK, et al. A 3-year randomized trial of lifestyle intervention for cardiovascular risk reduction in the primary care setting: the Swedish Björknäs study. PLoS One 2009;4(4):e5195.
- Lin JS, et al. Behavioral Counseling to Promote a Healthy Lifestyle for Cardiovascular Disease Prevention in Persons With Cardiovascular Risk Factors: An Updated Systematic Evidence Review for the U.S. Preventive Services Task Force [Internet]. 2014 Aug. Report No.: 13-05179-EF-1. Rockville (MD): Agency for Healthcare Research and Quality (US). U.S. Preventive Services Task Force Evidence Syntheses, formerly Systematic Evidence Reviews.
- Saha S, et al. Are lifestyle interventions in primary care cost-effective?-An analysis based on a Markov model, differences-in-differences approach and the Swedish Björknäs study. PLoS One 2013; 14; 8 (11).

Main activities

The ‘physical activity prescription’ programme includes a referral from the general practitioner, counselling sessions by a physical activity coach (using among others

motivational interviewing techniques, goal setting via a physical activity plan, feedback), and the organization of low-threshold activities by community health centers/local sports and recreational organizations (if not yet available).

The intervention consists of three major components:

(1) a PA prescription by a physician,
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The PA prescription is a generic written prescription handed out by a PC physician to inactive or sedentary patients. The prescription form is like a referral to a specialist and states the name of the patient, general guidelines of exercise and sedentarism, tips and limitations all linked to the medical status of the patient. With this prescription, patients have to make the first appointment with the personal PA coach. During this first contact (approx. 1 hour), the PA coach gains insights in the main barriers of being physically active and develops, in close cooperation with the patient, a personal PA plan. Based on the principles of goal-setting theories and self-regulation theories (Bartholomew, Parcel, Kok & Gottlieb, 2001) patients have to set a number of goals they want to achieve with their PA plan and have to define what or who can help to achieve their goals. Then, patients have to choose specific strategies to attain their goals and to be more active. A list with low threshold activities either organized by the community health center (e.g., start-to-walk, fitness, …) or by certain sports or recreational organizations in the neighborhood (e.g., swimming lessons, yoga, aqua fun, ...) was provided. PA instructors of these sports and recreational organizations were informed about the PA prescription program and received guidelines to make the participants feel at ease (e.g., being aware that high expectations result in high dropout rates, take account of personal circumstances, …). The second contact with the personal PA coach was planned in after one or two weeks. The main purpose was to assess whether the patient is reaching the defined goals and whether or not the strategies of the PA plan need any adjustments. These flexible follow-up contacts are planned in close consideration with the participants. Some need one or two follow-up contacts, other need approximately 10 contacts. Sometimes the coach assists participants with the first contact with the sports club. After six months, a final follow-up consultation with the personal coach was organized. During this final consultation, patients were asked to reflect upon the past six months and their PA goals. Information on the implementation of the PA plan and results in terms of being more physically active are passed on to the referring physician.

Evaluation

An evaluation of the programme was carried out in 2012. A pre-post-design with control group (a controlled trial) was carried out. Both quantitative (questionnaires) and qualitative data (interviews) were collected. See also point ‘evidence-base’ for other international studies.

Main results

After a six months intervention, results revealed a significant time by condition interaction effect for weekly light-intensity PA and total weekly PA (See Table 3). The weekly light-intensity PA increased from baseline (9.97 ±12.21) to follow-up (12.35 ±9.75) in the intervention group, whereas for the control group, a decrease was noted from baseline (9.27

±12.18) to follow-up (9.00 ±10.62). In the intervention group, total weekly PA increased from baseline (11.01 ±12.62 METs week-1) to follow-up (25.07 ±21.55 METs week -1), while it decreased in the control group (from 12.43 ±15.11 METs week-1 at baseline to 11.30 ±13.30 METs week-1 at follow-up). Regarding the QOL-indicators (See Table 3), the data revealed a significant time by condition interaction effect for several indicators. The perceived health (p=0.04), sleep quality (p=0.04), feelings of happiness (p=0.003) and energy level (p=0.02) increased from baseline to follow-up in the intervention group and decreased in the control group. Furthermore, for the intervention group the feelings of depression (p=0.03) decreased significantly from baseline to follow-up, while for the control group a small increase was noted. The pain complaints decreased in both groups, though a significantly (p=0.003) larger decrease was found in the intervention group. No intervention effects were found for feelings of loneliness and stress level.

Process data revealed that 44% of the patients stated that the prescription was the little push they needed to be more physically active. About 9% said the prescription convinced them to be more active, 13% indicated it resulted in being physically active on a regular basis and 22% said the prescription did not motivate them, because they already wanted to be physically active before the intervention. The remaining 13% stated that the prescription did not change their PA. Next to the physicians' prescription and personal coach, the provision of budget friendly activities was the main motivator for being physically active. A good atmosphere, social support from family, friends and the teacher were mentioned as well. Answers on patients' participation in group activities revealed that about half of the patients (52%) reported never having taken part in group PA activities and one third (32%) reported taken part in PA group activities on a weekly basis. About 63% of the patients indicated that personal circumstances made it difficult to maintain regular program participation. Furthermore, results revealed that respectively 76% and 72% of the patients found PA more important and more enjoyable than at the beginning of the program. Also, nearly three quarters (74%) of the patients reported that they felt that they had more control over their health. About 85% of the patients evaluated the offered activities as sufficient. About 80% of the patients was satisfied with their program participation. About 82% intended to continue his/her current physical activity level in the future and 4% did not had this intention.

Key success factors and barriers

- A group that is hard to reach in health promotion is being reached with this practice: disadvantaged adults.
    - An important factor to reach these people is the prescription from a general practitioner. General practitioners are asked to apply proportionate universalism: put more effort in disadvantaged adults. Moreover the contribution of the intersectoral network is very important. It takes away barriers to meet / contact the coach always thinking from the perspective of the most disadvantaged or hearing the most disadvantaged in making decisions.
- Another success factor is the coaching. The coaching starts from the perspective of the participant. The participant is in charge of his/her change toward a more active life. The coach informs and motivates the participant. Each decision is taken by the participant. Thanks to the need-supportive coaching (Self-determination theory) the participant will not become dependent of the coach. The participant will become an independent active adult.
- Embedding in the local community is very important. At this level a lot of practical barriers can be taken away. Both for the barriers to go to the coach and the barriers to become

more active. For example: a local bike sharing point might be used more if the people from the neighborhood would learn where it is placed.

- Although it is also a success factor, the intersectoral network is also a barrier. All sectors are necessary for a good implementation of physical activity on prescription. But if one sector is unwilling, unable or… the whole implementation will suffer.
- In the pilot region, the participants did not have to pay a personal contribution. Therefore, we could expect that this will be an extra barrier for participation when this is the case.
- The contribution of the general practitioners is very important. Although they are willing, their busy time schedule makes it hard for them to refer.

INHERIT Perspective

This project has been included given its positive impact on physical activity, health, and quality of life of (disadvantaged) adults. PA on prescription aims to change the inactive lifestyle of adults with health condition(s) into a sustainable, more active lifestyle. The intervention consists of three major components: 1) a PA prescription by a physician, 2) the development of a personal PA plan with a personal PA coach and, 3) follow-up consultations. The project has a clear focus on changing BEHAVIOUR but also takes into account the individual EXPOSURE/EXPERIENCE to low-threshold opportunities for physical activity.

More information

In attachment – doctoral thesis of Veerle Dubuy, including chapter on PA on prescription - Page 77-92

Many reports in Dutch available, not uploaded.

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