Adherence to and effects on physical function parameters of a community-based standardised exercise programme for overweight or obese patients carried out by local sports clubs

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ABSTRACT

Objectives: To evaluate the adherence to a sports-club–based standardised real-life exercise programme for overweight or obese patients. The effects on physical function parameters, anthropometry and quality of life were also assessed.

Study design: Within this prospective cohort study data from patients in Austrian sports-club–based programmes were analysed.

Methods: Sports-club–based programmes were held twice a week and carried out by local trainers. The target group was overweight or obese patients. Adherence was determined after 2 and 6 months, and physical function parameters were evaluated at baseline and after 2 months.

Results: A total of 71 patients (age: 52.0; standard deviation [SD: 12.1] years; body mass index [BMI]: 37.3 [SD: 8.2] kg/m²) took part in the study. Within the first 2 months the adherence rate was 62%, while 20% (14/71) participated in ≥75% of all offered sessions. After 6 months, 49% (17/35) of the retained sample still participated regularly in an exercise class. At baseline, muscle strength represented only 70% of the age- and sex-specific reference values and could be increased in a range from +4.0% (1.3 [SD: 3.0] kg; muscular endurance for the pectoral muscles) to +22.5% (16.1 [SD: 17.5] kg) (muscular endurance for the lower limb muscles). Concerning endurance capacity, the heart rate for a constant submaximal workload decreased from 126.4 (SD: 21.7) beats per minute at baseline to 120.9 (SD: 21.1) after 2 months (P < 0.001).
physical inactivity, especially of overweight and obese patients. Barriers of this target group for exercising in local sports clubs could be reduced.

This study aimed to evaluate the adherence to and participation in this real-life exercise programme. The effects on physical function parameters, anthropometry and quality of life were also assessed.

Methods

This cohort study evaluates the adherence and participation of a recently developed sports-club—based programme in a real-life setting. The study was carried out in Vienna (Austria) between September 2012 and October 2015. In 2012, 33 standardised exercise classes at 12 different locations were provided and could be attended by our study population. All the exercise classes were carried out in a standardised manner (see description below), but were not restricted to study participants. Within this context, real-life setting means that the exercise classes were offered from local sports clubs, using their own exercise trainers and equipment. They were included in the overall programme of these clubs and were not organised exclusively to perform a study.

Participants

In Austria, health insurance is obligatory. Therefore, almost everybody is insured and has access to the health system. For this study, patients aged between 18 and 85 years with less than 150 min of moderate-intensity physical activity per week were invited during a routine visit to a general practitioner’s office or other medical facilities to participate in the exercise programme. Any known acute or chronic contraindications for exercise were an exclusion criterion. Patients suffering from non-communicable diseases like obesity, type 2 diabetes or hypertension were eligible to take part in the study.

Recruitment for the exercise programme

The Social Insurance Authority for Business53 informed general practitioners, outpatient departments and health resorts by post, phone calls and personal appointments. Primarily physicians or their staff informed the patients about the exercise programme. Therefore, posters and flyers were provided. Based on the patients’ medical history, physicians decided if the participation in a community-based exercise programme was induced. Due to the fact that recruitment was
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