

DETERMINANTS OF NON-PARTICIPATION IN A BEHAVIOUR CHANGE INTERVENTION STUDY IN APPARENTLY HEALTHY INDIVIDUALS AGED 42-65 YEARS

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BACKGROUND

Non-participation can

- bias the outcome in intervention studies (Chinn et al., 2006) and
- reduce the study sample representativeness (Attwood et al., 2016).

The aim of the present study was to examine individual-related characteristics associated with non-participation in a study aiming to increase physical activity and to reduce sedentary time in leisure time.

METHODS

A sample of a prior study that investigated the reach of different population groups (general practice, job agency, health insurance) within a computerized cardiovascular risk factor screening program followed by facultative blood pressure measurement (Guertler et al., 2016) provided the basis for the present study (n=1231).

A random sample (n=376) of eligible individuals were asked to participate again in a study aiming to test the feasibility of a tailored counselling letter intervention (Figure 1). The recruitment took place between February and July 2015.

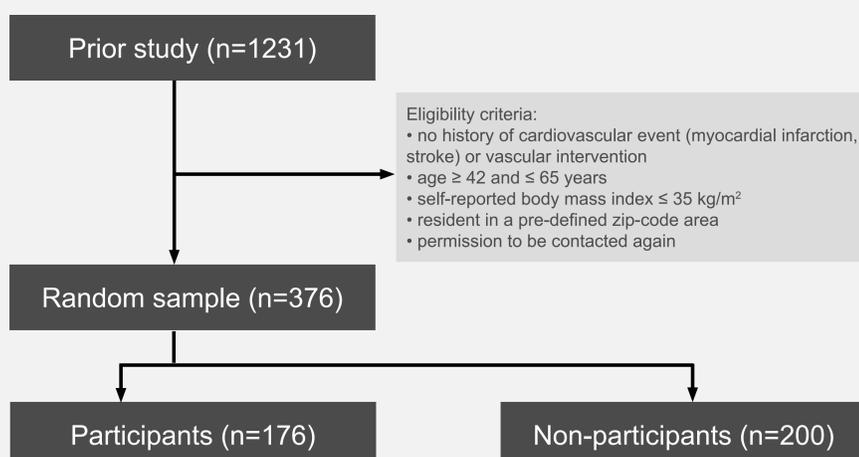


Fig. 1 Flow of participation

Participants consented to

- attend a cardiovascular examination program (blood sample taking, measurement of blood pressure and waist circumference),
- wear an accelerometer for 7 days, and
- fill in a paper-pencil questionnaire on physical activity and sedentary behaviour.

Comparison of characteristics of non-participants and participants were analysed using multiple logistic regression. Characteristics included: sex, age, weight, systolic blood pressure (SBP), education, and smoking. Subsequently, this analysis was stratified by sex.

RESULTS

Table 1 provides descriptive information on the participants.

	Participants (n=176)		Non-participants (n=200)	
	Men (n=64)	Women (n=112)	Men (n=67)	Women (n=133)
Age, years (M, SD)	51.6 (6.0)	52.7 (6.2)	50.0 (6.3)	51.5 (6.4)
Weight, kg (M, SD)	87.0 (11.3)	70.9 (11.3)	85.5 (13.6)	73.5 (12.7)
SBP, mmHg (M, SD)	142.5 (17.3)	135.4 (17.1)	150.4 (20.3)	134.9 (20.8)
Education =10 years (n, %)	41 (64.1)	81 (73.0)	44 (65.7)	95 (71.4)
Smoking Yes (n, %)	17 (26.6)	25 (22.3)	40 (59.7)	57 (42.9)

Non-participation was significantly associated with smoking (OR=2.53; CI=1.49-4.30), education (reference group =10 years vs. <10 years: OR=2.51; CI=1.16-5.43), and female sex (reference group female vs. men: OR=0.55; CI=0.30-1.00).

Stratified analyses confirmed smoking as predictor of non-participation for women (OR=2.17; CI=1.11-4.24) and men (OR=3.14; CI=1.30-7.59). Systolic blood pressure (OR=1.03; CI=1.00-1.05) was positively associated with non-participation for men (Figure 2).

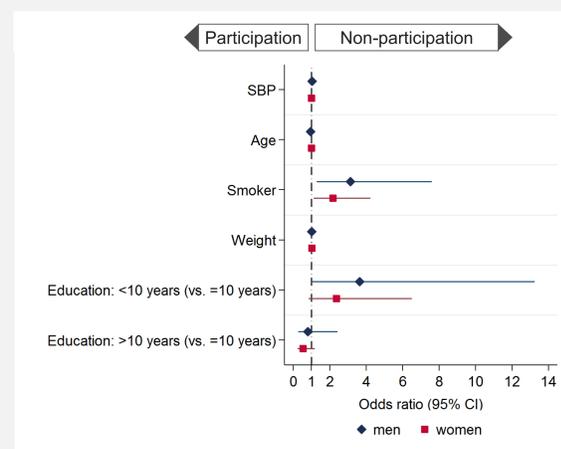


Fig. 2 Results of logistic regression analyses stratified by sex

CONCLUSION

Results revealed a selection bias. Smoking, low education, and female sex were associated with non-participation in our intervention study. In addition to a behavioural factor like smoking, wearing technical devices might influence study participation. There is evidence that women declined participation in accelerometry more likely than men (Weymar et al., 2015). To optimise recruitment strategies, consideration of these factors is suggested.

References

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Conflict of interest

The authors declare that there is no conflict of interest.

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