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KOMPAKT

Facts and Trends from Federal Health Reporting



Key Statements

- ➤ Women take part in health behaviour change programmes twice as frequently as men.
- ➤ Participation levels in exercise programmes are higher than in diet and relaxation programmes.
- ➤ People of low social status participate in these programmes less frequently.
- ▶ Pronounced health awareness is associated with participation in health behaviour change courses.
- ► Health behaviour is strongly related to participation in health behaviour change programmes.

Prevention Programmes – Who takes part?

Measures to promote healthy diet, physical activity and relaxation are of key importance in the prevention of prevalent noncommunicable diseases such as cardiovascular and metabolic illnesses or cancer (National Association of Statutory Health Insurance Funds (GKV-Spitzenverband) 2010; WHO 2011).

Some structural programmes aim to positively influence living, working and environmental conditions for the population as a whole, while health behaviour change programmes are designed to improve individual health behaviour (e.g. physical activity), often without any direct reference to the specific living environment in which this behaviour takes place (e.g. school or company) (Rosenbrock, Michel 2007).

Information, advice and the practicing of new habits help to promote healthy behaviour on the part of the individual. In the case of adults, this primarily takes the form of group courses offered by adult education centres, sports clubs, companies, commercial providers like fitness studios or statutory health insurance funds. The prevention activities are dominated by individual oriented health behaviour change programmes, particularly in the area of primary prevention (Rosenbrock, Michel 2007).

In the following, representative data for Germany are used to show which population groups make use of health behaviour change programmes and which factors promote participation in these programmes. The analyses are based on data from the »German Health Update« (GEDA) study published by the Robert Koch Institute in 2009.

The choice of relevant factors for participation in health behaviour change programmes is based on the frequently used analytical framework of the »Behavioral Model of Health Service Use« developed by Andersen (1995) (optimised in Andersen, Davidson 2007).

For the purposes of the survey, the predisposing characteristics that may increase the probability of participation in health behaviour change programmes are analysed. Besides demographic factors (sex, age) and social determinants (social status, living in a relationship, social support), other factors include attitudes towards health, such as taking care of one's own health.

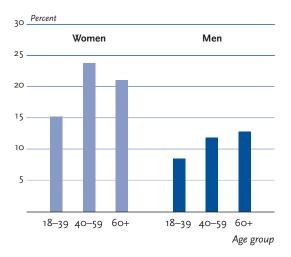
The study also investigates wether the self-perceived health is a need factor affecting participation in the programmes in question. Finally, the influence of various health behaviours such as diet, physical activity, smoking, alcohol consumption and body weight on participation in prevention programmes is also analysed.

Women take part in programmes twice as frequently as men

In the 12 months prior to the survey, around one in six (16%) adults participated in at least one health behaviour change programme, and the figures show clear differences between women and men: 20% of women participated in these types of programmes compared to only 11% of men. Among women, the age group of 40 to 59 year-olds was most likely to participate in these programmes (with a share of 24%), while the most active group among men were the over 60 year-olds with 13% (Figure 1).

Figure 1
Participation in at least one health behaviour change programme by sex and age

Database: GEDA 2009



Exercise-based programmes have the highest participation levels

The highest participation rates were recorded for exercise programmes. One in eight respondents said they had already participated in a physical fitness or exercise programme, while only one in twenty had taken part in a diet or relaxation programme (Table 1).

German Health Update (GEDA)

Survey period:

Data owner: Robert Koch Institute Goals: Provision of updated data on health-related topics and the analysis of current developments and trends Survey method: Computer-assisted telephone interviews (CATI) Population: People resident in Germany aged 18 years and over Sample: 21,262 women und men Cooperation rate:

July 2008 to June 2009

Table 1
Participation in diet, physical activity and relaxation programmes by sex
Database: GEDA 2009

	Diet	Physical activity	Relaxation
	in %	in %	in %
	(95 %-CI)	(95 %-CI)	(95 %-CI)
Total	5.0	12.5	4.5
	(4.6-5.4)	(11.9 – 13.0)	(4.2-4.8)
Women	5.8	16.1	6.0
	(5.3-6.4)	(15.3 – 17.0)	(5.5–6.5)
Men	4.1	8.6	2.9
	(3.6–4.7)	(7.9–9.3)	(2.5-3.4)

The different participation rates also indicate that programmes to promote physical activity were probably offered more frequently during the survey period than diet programmes and relaxation classes (Medical Review Board of the National Association of Statutory Health Insurance Funds (MDS), National Association of Statutory Health Insurance Funds (GKV-Spitzenverband) 2010).

Significant differences between the sexes were found in all three areas under observation. Women participated in programmes to promote exercise and relaxation around twice as frequently as men. The differences between the sexes were slightly lower for prevention programmes focusing on diet (Table 1).

With regard to age, there are theme-specific differences in participation in programmes in the various prevention areas. 40 to 59 year-old women (9 %) and men (4 %) showed significantly higher participation rates in relaxation classes than the over 60 year-olds (women: 4 %; men: 2 %).

The age group of 18 to 39 year-olds (women: 12%, men: 7%) took part in exercise-based programmes less frequently than the group of 40 to 59 year-olds (women: 19%; men: 10%) (significant difference); this pattern was also observed in the field of diet among the 18 to 39 year-olds (women 5%; men: 2%) compared to the over 40 to 59 year-olds (women: 7%; men 5%) (not shown).

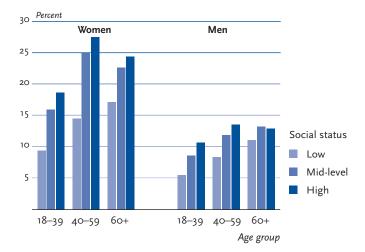
Low social status is related with the lowest participation levels in the programmes

When it comes to socio-structural determinants, social status (multi-dimensional index calculated from school education, occupational status and income; cf. Lampert, Kroll 2009) plays a particularly important role. In the context of prevention, social status indicates whether the prevention measures reach the target group of socially disadvantaged population groups.

In the 2009 GEDA study, people of low social status participated far less frequently overall in at least one health behaviour change programme in the three specified areas (women 14%, men 8%) than respondents of mid-level social status (women 21%, men 11%) or high social status (women 24%, men 13%). The lower participation rates

Figure 2
Participation in health behaviour change programmes by sex, age and social status

Database: GEDA 2009



of people with low social status compared to groups with mid-level or high social status were observed in both sexes in all age groups (Figure 2).

The differences among women remain for the areas of exercise and relaxation even after statistical control for the age effect, while in the case of men the influence of social status was significant only with regard to relaxation classes after control for age.

Living together in a relationship often promotes the participation of women

Other key social determinats include living in a relationship and the degree of social support (Figure 3). Social support comprises the availability and expectation of help from a social network in difficult situations (Franzkowiak 2011).

In the 2009 GEDA study, the respondents assessed the level of social support using the Oslo 3-Items Social Support Scale (Dalgard et al. 2006). The interview included questions regarding the number of dependable people in the case of serious personal problems, the involvement of others in a person's own life and the availability of help from neighbours. The individual values were added to form an overall score (3 to 14 points). A higher level of social support (12 to 14 points) was associated with women and men with higher participation rates in programmes (Figure 3).

People with a low level of social support (3 to 8 points) participated in programmes most seldom. When the age factor was additionally taken into account, however, the differences among both women and men were no longer significant.

People who had a partner participated in the programmes more frequently than people who lived alone. There was a positive correlation when couples lived in the same

Measurement of participation in a health behaviour change programme

The questions were preceded by a brief introduction: »There are a number of programmes to promote health organised by various providers and focusing on topics like nutrition, exercise, relaxation and sport or fitness. Some of these programmes are funded by the statutory health insurance funds. Have you taken part in programmes of this kind during the last 12 months? For example ...« (1) losing weight, (2) healthy diet, (3) relaxation or stress management, (4) improving physical fitness or mobility. For the purposes of evaluation, the two response options (1) losing weight and (2) healthy diet were grouped to form the variable »nutrition«.

The variable »participation in at least one health behaviour change programme« was created to take account of the fact that some of the respondents have taken part in more than one of the programmes during the last twelve months and as the questions refer to behavioural prevention elements (diet, physical activity and relaxation).

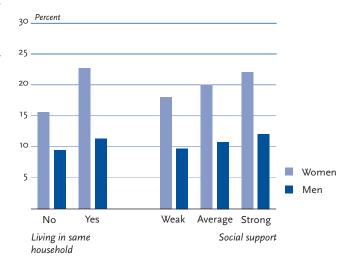
household (Figure 3). When the age factor was taken into account, the findings were confirmed for 18 to 39 year-old women and women over the age of 60, while the significant differences were no longer present in the case of men.

Participation in programmes is higher among respondents under stress due to housework

Relationships in the social environment are not only an indicator for the presence of social support; they can also mean stress due to housework, raising children and caring for relatives at home.

In the 2009 GEDA study, the respondents were asked to assess their stress due to housework in the form of such

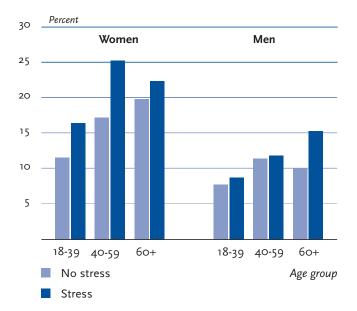
Figure 3
Participation in health behavior change programmes by living together in the same household, social support by sex
Database: GEDA 2009



things as shopping, cooking, cleaning, gardening and similar tasks (cf. Fuchs 2008). Women and men under this type of stress took part more frequently overall in prevention programmes than people not exposed to this stress.

17% of those under stress from housework took part in programmes compared to 13% of those not exposed to this stress. Women and men in all age groups participated in prevention programmes more frequently if they were under stress from housework. These differences were significant for women below and men above the age of 60 (Figure 4).

Figure 4
Participation in health behaviour change programmes by stress due to housework, taking into account sex and age
Database: GEDA 2009



A higher level of health awareness is associated with participation

Health awareness and locus of control - in other words, the expectation that personal action has a positive impact on health (Kryspin-Exner, Pintzinger 2010; Faltermaier 2011) - are among the factors that influence health behaviour and therefore also the probability that people will take advantage of health behaviour change programmes.

Health awareness was determined by asking the question »How much care do you take of your health?«. Almost one in five respondents (19%) who said that they take very much or much care of their health took part in a prevention programme, compared to only one in 15 (7%) among those who said they take not so much or no care of their health.

The locus of control was determined by asking the question »How much do you think people can do to maintain or improve their state of health?«. Respondents who said that it is possible for people to influence their health to a

major degree took part in programmes more often than those who were of the opinion that people can do not so much or nothing to improve their health (Table 2).

The findings on health awareness and locus of control were confirmed when the factors of age and social status were simultaneously taken into account.

Higher participation rates among the chronically ill

The self-perceived health is not only a good indicator for objective state of health but also influences the degree of the self-perceived threat due to illness and hence also the health behaviour (Kryspin-Exner, Pintzinger 2010).

In the 2009 GEDA study, respondents who assessed their general state of health as fair to very bad participated in a health behaviour change programme more frequently overall (19%) than people who assessed their state of health as good to very good (14%). Equally, chronically ill respondents took part in preventive programmes considerably more frequently (20%) than people who did not describe themselves as chronically ill (13%).

Those who said they were restricted in the performance of daily activities due to health problems also recorded a

Table 2
Participation in health behaviour change programmes by attitude towards health
Database: GEDA 2009

	in percent
Women	
Taking care of own health	
Not at all / not so much	11.8
To an average degree	17.3
Much / very much	22.9
Maintaining/improving own state of health: how much can people do?	
Nothing / not so much	10.5
Quite a lot	17.4
Much / very much	20.8
Men	
Taking care of own health	
Not at all / not so much	3.9
To an average degree	8.6
Much / very much	14.1
Maintaining/improving own state of health: how much can people do?	
Nothing / not so much	12.5
Quite a lot	8.8
Much / very much	11.2

far higher participation rate in programmes than respondents whose health was not impaired (20% versus 14%). These differences were found in both sexes (Figure 5).

After statistical control for age, there were no significant differences in the effect of general state of health on participation among women in all age groups and only among the men between the ages of 40 and 59.

The findings were different for respondents with chronic illnesses, and significant differences remained to a large degree in both sexes with regard to participation (with the exception of 18 to 39 year-old men). Significant differences were recorded among women up to 59 years of age with regard to self-assessed limitations due to illness, while the only differences for men were among the 40 to 59 year-olds.

Selected behavioural characteristics of participants

In this context, health behaviour is taken to mean different individual forms of behaviour that have a positive impact on health. If health behaviour such as exercise is exhibited with the aim of maintaining, improving or regaining a person's health, then it is closely related to attitudes towards health (Kryspin-Exner, Pintzinger 2010).

Adequate physical activity, healthy diet, normal weight and abstention from consumption of harmful substances are central forms of health behaviour that are addressed in the area of prevention and health promotion (Kryspin-Exner, Pintzinger 2010). With regard to physical activity, a higher percentage of participants was found in the average activity group (more than 2.5 hours a week on fewer than 5 days) than in the group of those engaging in a low level or an extremely high level of activity (19 % versus 16 % and 14 %, respectively) (Table 3).

People who adhered to the current recommendations of five servings of fruit and vegetables a day recorded the highest percentage for participation (24%) (Table 3). The

percentage of people who participated in a programme increased with increasing body weight. One unexpected finding was the low rate of 12 % among the underweight respondents (Table 3).

Smokers took part in the prevention programmes far less frequently (11%) than people who used to smoke or never smoked at all (both 18%). 17% of people with moderate levels of alcohol consumption participated in a health behaviour change programme compared to only 14% of those with high-risk consumption levels or zero consumption (Table 3).

These descriptive results were confirmed after controlling for age, sex and social status. The positive association between zero alcohol consumption and participation in a health behaviour change programme was found to be low, however.

Discussion

Around one in six of the adults in the 2009 GEDA study took part in at least one health behaviour change programme in the twelve months prior to the study, with women participating in such programmes twice as frequently as men. Adults with low social status were one third less than respondents with high social status.

Although socially disadvantaged population groups often exhibit a poor state of health (RKI 2005), these groups were the least likely to take part in the various programmes. In order to reduce the social inequality of health opportunities, health behaviour change programmes should be integrated in the setting approach of health promotion (cf. SVR 2005; Altgeld, Kolip 2010; Groeneveld, Proper et al. 2010; http://www.gesundheitliche-chancengleichheit.de).

Alongside sex and social status, factors such as resources and stress also influence participation in health behaviour change programmes. In the 2009 GEDA study,



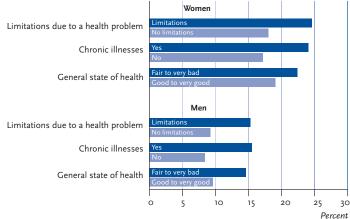


Table 3
Participation in courses by health behaviour
Database: GEDA 2009

	in percent	OR* (95%-CI)
Physical Activity ¹		
Less than 2.5 hours a week	15.6	Ref.
More than 2.5 hours a week on fewer than 5 days	18.5	1.34** (1.23 – 1.47)
At least 5 times a week for at least 30 min.	13.5	0.85 (0.97–1.03)
Fruit and vegetables (servings per day²)		
0 to 2	13.1	Ref.
3 to 5	19.7	1.32** (1.22-1.44)
More than 5	23.8	1.66** (1.48–1.85)
Body weight (Body-Mass-Index = BMI) ¹		
Underweight (BMI < 18.5)	11.7	0.82 (0.63 – 1.06)
Normal weight (BMI 18.5-24.9)	15.1	Ref.
Overweight (BMI 25.0-29.9)	16.2	1.21** (1.11–1.31)
Obesity (BMI > 30)	16.8	1.31** (1.17–1.46)
Smoking		
Smoker (daily or occasional)	11.4	Ref.
Used to smoke	17.5	1.48** (1.33-1.64)
Never smoked	17.5	1.36** (1.24–1.49)
Alcohol consumption ³		
High-risk consumption	13.8	Ref.
Moderate consumption	17.2	0.93 (0.82-1.04)
No alcohol consumption	14.3	1.12** (1.03 – 1.22)

^{*} Odds ratios from separately computed logistic regression models, controlled for age group, sex and social status

participation among women was associated with living together in a relationship. Moreover, both sexes recorded higher participation rates in the case of stress due to housework, the presence of a chronic illness and self-assessed limitations due to health problems.

These findings are in line with central assumptions of well-known models for health behaviour (Health Belief Model or Health Action Process Approach; cf. Kryspin-Exner, Pintzinger 2010; Seibt 2011): the perceived subjective susceptibility and the subjectively perceived severity

of a possible illness serve to promote preventive health behaviour. The presence of social support, such as living together in a relationship, can increase self-efficacy, which social-cognitive process models see as a key factor not only in planning but also in engaging in a specific form of health behaviour (cf. Seibt 2011).

Participation in health behaviour change programmes is promoted by the conviction that people can themselves do much to preserve their health and is closely connected to other types of health behaviour such as diet, exercise, body weight, smoking and alcohol consumption. One frequently voiced criticism is that health behaviour change programmes are used by population groups who already exhibit high-level health behaviour (prevention dilemma; cf. Hurrelmann et al. 2010).

The 2009 GEDA study supplies a mixed picture in this respect. On the one hand, participation in at least one health behaviour change programme during the last twelve months is above-average among respondents with a high consumption of fruit and vegetables, engage in more than 2.5 hours of physical activity a week (on fewer than 5 days) or are non-smokers. At the same time, however, overweight and obese people also frequently take part in courses, irrespective of age, sex and social status.

One limitation here is that the GEDA study allows only cross-sectional analyses and that it is not therefore possible to depict cause-effect relationships. The data collected in the »German Health Interview and Examination Survey for Adults« (DEGS1) will permit longitudinal analysis (Gößwald et al. 2012, RKI 2009; www.degs-studie.de).

Participation in preventive programmes has increased considerably during the last ten years (Medical Review Board of the National Association of Statutory Health Insurance Funds (MDS), National Association of Statutory Health Insurance Funds (GKV-Spitzenverband) 2010; Jordan et al. 2011). A recent study shows that large sections of the population see their own risk-related behaviour as the most important factor influencing their health and welcome programmes geared towards prevention (Marstedt, Rosenbrock 2009).

However, there is still a need to underline the importance of prevention and health promotion in the field of health policy, to expand funding for the relevant programmes (Hurrelmann et al. 2010) and to implement not only health behaviour change programmes but also structural programmes (German Advisory Council on the Assessment of Developments in the Health Care System (SVR) 2005).

Susanne Jordan, Elena von der Lippe Robert Koch Institute Department of Epidemiology and Health Reporting

^{**} Significant difference relative to the reference group

¹ Classification based on recommendations of the World Health Organisation (cf. RKI 2011)

² Classification based on recommendations (fruit and vegetable consumption including up to one glass of fruit or vegetable juice; cf. Rabenberg, Mensink 2011)

³ Estimated alcohol consumption using the AUDIT-C questionnaire scale (cf. RKI 2011)

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Editors

Martina Rabenberg, Dr. Livia Ryl Robert Koch Institute Department of Epidemiology and Health Reporting General-Pape-Straße 62 12101 Berlin Tel.: 030-18754-3400 E-Mail: gbe@rki.de www.rki.de/gbe

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