Physical activity counselling by physicians – Results from the KomPaS study

Abstract
Physical activity counselling aimed at promoting physical and sporting activity is easily accessible and has the potential to reach many people. Until now, very little has been known about the factors influencing physical activity counselling and their frequency. However, the study ‘KomPaS: survey on communication and patient-safety’, provides current data about this topic. The analyses published here are based on data from 4,561 people aged 18 or older who were interviewed by telephone between May and September 2017 and who stated that they had visited a physician’s practice or outpatient clinic in the last twelve months. 28.6% of participants reported having received a physician’s counselling about sporting activity during the past twelve months. Sex, age and socioeconomic status have an impact on how frequently participants reported a physical activity counselling by a physician as well as changes to physical activity. As such, differences associated with sex, age and socioeconomic status should be taken into account during physical activity counselling so as to provide various population groups with targeted support.

Introduction
Physical activity can help reduce the risk of noncommunicable diseases and counteracts the aggravation of chronic diseases [1, 2]. In Germany, less than half of the adult population meets the World Health Organization’s recommendations on physical activity [3]. As such, the promotion of physical and sporting activity remains one of the central challenges faced by health promotion and disease prevention in Germany today. A wide variety of measures are currently used to face these challenges, and, in addition to environmental and policy-related approaches and measures that target people’s daily lives, this includes the provision of physician’s counselling within health care settings [4].

As many people visit a physician’s practice at least once a year [5, 6], and most people still tend to consult physicians about health-related issues [7], physical activity counselling can be used to provide patients highly accessible, needs-based advice on physical activity. Furthermore, assessments of physical activity can also be used to deliver tailored counselling to patients, which should include referral to experts on physical activity, sports clubs and other providers of physical and sporting activity [8].

In Germany, the 2015 Preventive Health Care Act strengthened physician’s counselling such as that medical health checks can include prevention-oriented counselling, such as advice about physical activity. The Act also allows
that physicians can issue patients with a letter recommending individual behaviour-related preventive measures offered by their health insurance [9]. This ties in with experiences made in nine federal states in Germany, where physicians have been able to prescribe patients with preventive services that promote physical activity [10].

Until now, there have been very few studies about the frequency of physician’s physical activity counselling and their influencing factors, particularly at the population level. Nevertheless, data are available from the German National Health Interview and Examination Survey 1998 (GNHIES98) and the German Health Interview and Examination Survey for Adults (DEGS1). In 1998, about one tenth of the population aged between 18 and 64 reported having attended a physical activity counselling. These figures decreased from 9.3% to 7.7% among women and from 11.1% to 9.4% among men in the period between the studies (1997–1999 and 2008–2011) [11, 12]. The study ‘KomPaS: survey on communication and patient-safety’ provides current data about the frequency of physician’s counselling on physical and sporting activity from the point of view of the population. This section of the study focused on the extent to which uptake of physical activity counselling differs according to sex, age and socioeconomic status.

**Indicator**

Data on the use of physical activity counselling provided by physicians was collected for the KomPaS study using a representative telephone survey undertaken between May and September 2017. The survey covered the adult resident population in Germany. Participants were asked whether they had visited a physician’s practice or an outpatient clinic in the past twelve months. Those who answered in the affirmative were then asked: ‘Were you provided with counselling about any of the following health-related topics during any of these visits in the last 12 months?’ The topics covered physical activity but also nutrition and stress management. Participants who reported a counselling were asked whether they believed the counselling had led them to change their behaviour (‘Did you modify your behaviour as a result’, response categories: ‘yes’ and ‘no’). These items were taken from the DEGS1 study [13] and adapted from a written survey for use with a telephone survey.

The following analyses are based on data from 4,561 people aged 18 or over (2,636 women, 1,925 men) who visited a physician’s practice or outpatient clinic in the twelve months prior to the KomPaS study, which was the case with 90.8% of women and 85.6% of men. This article reports relative frequencies with 95% confidence intervals (95% CI) stratified by sex, age and socioeconomic status. Wide confidence intervals indicate a greater level of statistical uncertainty in the results. A significant difference is assumed in cases where the p-value is less than 0.05 after taking weighting and survey design into account. In order to provide representative results for the total resident population in Germany, the household sizes in the sample were adjusted to reflect the distribution in the population. This was followed by design and adjustment weighting to correct for deviations from the population structure (as of 31 December 2016) with regard to age, sex, education and place of residence (federal state). All analyses were carried out using Stata 15.1 [14]. A detailed description of the methodology and the sample used for the KomPaS study can be found in the study report [15].
Almost one third of participants reported having attended a physician’s counselling about sporting activity in the last twelve months.

Results and discussion

Almost one third of participants (28.6%) reported that they had attended a physical activity counselling provided by a physician on sporting activity during the past twelve months (Table 1). No significant differences were identified between the sexes, and relative frequencies differed only slightly (women 27.4%, men 29.9%). The proportion of women who reported a counselling did not change significantly with age. In contrast, 45- to 64-year-old men reported a counselling much more frequently than men in other age groups. For example, 45- to 64-year-olds differed from the 30- to 44-year-old group by 11.2 percentage points, a frequency that is almost one third higher. Although no significant differences were identified for socioeconomic status within groups of women or men, differences were identified between the sexes: 34.6% of men in the high socioeconomic status group reported having attended a counselling provided by a physician on sporting activity, compared to 23.3% of women in the same status group.

According to data from the KomPaS study from 2017, the frequency of physical activity counselling by physicians has more than doubled since DEGS1 (2008–2011), when around one tenth of those surveyed reported having attended a counselling about sporting activity [11, 12]. Even if the two surveys used different survey modes (a written questionnaire versus a telephone-based interview), they asked the same questions, albeit adapted to the mode in question, and the results are therefore comparable. Reasons for the higher frequency are likely to lie in the increased focus on physical activity in health promotion, prevention and therapy over the last decade, which is also reflected in measures such as the ‘prescription of physical activity’ [10] and the introduction of the Preventive Health Care Act in 2015 with its physician’s recommendations on prevention. The 2019 Prevention Report by Germany’s National Prevention Conference states that initial, non-representative analyses also indicate that physicians most frequently prescribed physical activity programmes when issuing a prevention recommendation [9]. Further research should clarify the reason why 45- to 64-year-old men and men in the high socioeconomic status group most frequently reported physical activity counselling. This is important because it had been assumed that the low socioeconomic status group would display the highest fre-
Physical activity counselling by physicians

The differences highlighted by the KomPaS study in terms of physical activity counselling by sex, age and socioeconomic status (n=1,343) are noteworthy. Significantly, differences were only identified for the high socioeconomic status group. Men in the 45- to 64-year-old age group more frequently reported having attended a counselling than men in other age groups.

When participants were asked whether they had changed their behaviour due to a physician’s counselling about sporting activity, more than half of women and men (total: 55.6%) stated that they had done so. Due to the low number of cases, no sex-specific results are reported here for age or socioeconomic status. In general, no significant differences were identified by age but significant differences were found between the medium and high socioeconomic status group. Participants in the medium status group stated significantly more frequently that they had changed their behaviour after a physician’s counselling than the high status group (60.1% versus 49.1%, Figure 1). The differences between the medium and the low socioeconomic status group are not statistically significant. Further analyses should investigate the reasons for the differences in socioeconomic status and sex in the implementation of physical activity counselling.

It is important to note that as the KomPaS study is a cross-sectional study, no causal conclusions can be drawn from the results presented here. Furthermore, the study only collected (self-reported) data on the population’s point of view, and not on the type, quality and impact of physician’s counselling. High-quality individual studies are still lacking, particularly when it comes to the effectiveness of counselling [4]. An analysis using data from DEGS1 showed that participants who reported a counselling were 2.5 times more likely to take part in behavioural preventive measures aimed at promoting physical activity [18]. Overall, however, there is insufficient and contradictory evidence about the effectiveness of physical activity counselling [4]. About half of available studies identify minor short- or medium-term effects [4, 19]. However, the counselling under study often took place within the context of physical activity programmes instead of being individual measures [4]. In addition, the results of a study on the ‘prescription of physical activity’ [20] indicate that physicians need even more information about the importance of physical and sporting activity for health, as well as about the availability of physical activity programmes in their local area. In another study, half of patients surveyed expressed a desire for more support from their health insurers to enable them to take up physical activity [21]. Therefore, further research is needed into patients’ assessments, and at the same time those of the physicians providing counselling, as well as characteristics of the counselling for physical-sporty activity, and, above all, their effectiveness.

Men in the 45- to 64-year-old age group more frequently reported having attended a counselling than men in other age groups.

**Figure 1**
Self-reported changes in behaviour after a physician’s counselling about physical and sporting activity by socioeconomic status (n=1,343)
Source: KomPaS study (2017)
The medium socioeconomic status group more frequently reported having changed their behaviour after a physician’s counselling than the lower or higher status group. Economic status indicate that counselling have further potential. In addition to settings-based preventive measures, for example, in companies and the community, counselling by physicians is easily accessible and is able to reach a relatively large section of the population. Structured counselling [22] and successful doctor-patient communication are promising approaches that should be implemented and further strengthened as part of physician’s training [23]. If physical activity counselling by physicians are to be effective, however, the differences associated with sex, age and socioeconomic status need to be taken into account – even if further research is still needed on this issue.

The German version of the article is available at: www.rki.de/journalhealthmonitoring

Data protection and ethics
The study ‘KomPaS: survey on communication and patient-safety’ was subject to strict compliance with the data protection provisions set out in the EU General Data Protection Regulation (GDPR) and the Federal Data Protection Act (BDSG). The Federal Commissioner for Data Protection and Freedom of Information approved the study on 21 June 2017. The Commissioner had no data privacy concerns about the study being carried out in the manner that was planned.

The participants were informed about the aims and content of the study as well as about data protection, and provided their informed consent to participate. Participation in the study was voluntary.

Funding
The study ‘KomPaS: survey on communication and patient-safety’ was funded by the German Federal Ministry of Health (funding code: ZMVI1-2516FSB410).

Conflicts of interest
The authors declared no conflicts of interest.

Acknowledgment
The authors would like to thank the study participants. The authors are also very grateful to their colleagues at the Robert Koch Institute who provided support during the implementation of the study.

References
1. Warburton DER, Bredin SSD (2017) Health benefits of physical activity: a systematic review of current systematic reviews. Curr Opin Cardiol 32(5):541–556
2. Lee IM, Shiroma EJ, Lobelo F et al. (2012) Effect of physical inactivity on major non-communicable diseases worldwide: an analysis of burden of disease and life expectancy. Lancet 380(9838):219–229

Corresponding author
Dr Susanne Jordan
Robert Koch Institute
Department of Epidemiology and Health Monitoring
General-Pape-Str. 62–66
12101 Berlin, Germany
E-mail: JordanS@rki.de

Please cite this publication as
Jordan S, Starker A (2021) Physical activity counselling by physicians – Results from the KomPaS study.
Journal of Health Monitoring 6(2):74–80.
DOI 10.25646/7148
Physical activity counselling by physicians

3. Finger JD, Mensink GBM, Lange C et al. (2017) Health-enhancing physical activity during leisure time among adults in Germany. Journal of Health Monitoring 2(2):35–42. https://edoc.rki.de/handle/176904/2660?locale-attribute=en (As at 25.09.2020)

4. Rütten A, Pfeifer K (Eds) (2017) Nationale Empfehlungen für Bewegung und Bewegungsförderung. Forschung und Praxis der Gesundheitsförderung. Sonderheft 03. Bundeszentrale für gesundheitliche Aufklärung (BZgA), Köln

5. Kunstmann W, Henke R (2006) Gesundheitsberatung als ärztliche Aufgabe. Prävention und Gesundheitsförderung 1(2):115–120

6. Marstedt G (2010) Gesundheitsfragen – Information und Wissen der Bürger. In: Böcken J, Braun B, Landmann J (Eds) Gesundheitsmonitor 2010. Bürgerorientierung im Gesundheitswesen. Bertelsmann Stiftung, Gütersloh, P. 43–91

7. Baumann E, Czerwinski F (2015) Erst mal Doktor Google fragen? Nutzung neuer Medien zur Information und zum Austausch über Gesundheitsinformationen. In: Böcken J, Braun B, Meierjürgen R (Eds) Gesundheitsmonitor 2015. Bürgerorientierung im Gesundheitswesen. Kooperationsprojekt der Bertelsmann Stiftung und der BARMER GEK. Bertelsmann Stiftung, Gütersloh, P. 57–79

8. Stoutenberg M, Galaviz KI, Lobelo F et al. (2018) A Pragmatic Application of the RE-AIM Framework for Evaluating the Implementation of Physical Activity as a Standard of Care in Health Systems. Prev Chronic Dis 15:154

9. Die Träger der Nationalen Präventionskonferenz (2019) Erster Präventionsbericht nach § 20d Abs. 4 SGB V. Nationale Präventionskonferenz, Berlin

10. Loss J, Sauter A, Curbach J (2018) Das Rezept für Bewegung als Maßnahme ärztlicher Prävention. Public Health Forum 26(2):120–122

11. Gabrys L, Jordan S, Schlind M (2015) Prevalence and temporal trends of physical activity counselling in primary health care in Germany from 1992–1999 to 2008–2011. Int J Behav Nutr Phys Act 12:136

12. Gabrys L, Jordan S, Behrens K et al. (2016) Prävalenz, zeitliche Trends und regionale Unterschiede ärztlicher Bewegungsberatung in Deutschland. Dtsch Z Sportmed 67(3):53–58

13. Scheidt-Nave C, Kamtsiuris P, Gößwald A et al. (2012) German health interview and examination survey for adults (DEGS): Design, objectives and implementation of the first data collection wave. BMC Public Health 12(1)

14. StataCorp LLC (2017) Stata Survey Data Reference Manual, Release 15. Stata Press. https://www.stata.com/manuals/svy.pdf (As at 29.11.2018)

15. Horch K, Starker A, Jordan S (2019) Kommunikation und Information im Gesundheitswesen aus Sicht der Bevölkerung. Patientenversicherung und informierte Entscheidung (KomPaS). Sachverständ. Robert Koch-Institut, Berlin. https://www.bundesgesundheitsministerium.de/service/publikationen/prevention/details.html?bmg[pubid]=3327 (As at 01.04.2020)

16. Robert Koch-Institut (Ed) (2015) Gesundheit in Deutschland. Gesundheitsberichterstattung des Bundes. Gemeinsam getragen von RKI und Destatis. RKI, Berlin

17. Krug S, Jordan S, Mensink GB et al. (2013) Körperliche Aktivität: Ergebnisse der Studie zur Gesundheit Erwachsener in Deutschland (DEGS1). Bundesgesundheitsbl 56(5-6):765–771

18. Jordan S, Krug S, von der Lippe E (2018) Participation in group-based physical activity programmes for adults in Germany and associated factors: data from a nationwide cohort study. BMC Public Health 18(1):1371

19. Orrow G, Kinmonth AL, Sanderson S et al. (2012) Effectiveness of physical activity promotion based in primary care: systematic review and meta-analysis of randomised controlled trials. BMJ 344:e1389

20. Curbach J, Apfelbacher C, Knoll A et al. (2018) Physicians’ perspectives on implementing the prevention scheme “Physical Activity on Prescription”: Results of a survey in Bavaria. Z Evid Fortbild Qual Gesundhwes 131-132:66–72

21. Vogt L, Hoppe I, Thoma R et al. (2019) Wirksamkeit des Rezepts für Bewegung aus Patientensicht – die ärztliche Beratung und Handlungsschritte/-konsequenzen nach erfolgter Rezeptverschreibung. Dtsch Med Wochenschr 144(10):e64–e69

22. Wattanapisit A, Wattanapisit S, Wongsiri S (2020) Overview of Physical Activity Counseling in Primary Care. Korean J Fam Med (efirst)

23. Deutscher Ärztetag (2015) 118. Deutscher Ärztetag. Beschlussprotokoll. Frankfurt am Main, 12. bis 15. Mai 2015. Bundesärztekammer, Berlin
